بلك الرياض
Riyadh Block



الأداء الفني

تقارير المختبرات والاختبارات الفنية

التقارير الأصلية لاختبارات منتجاتنا في مختبرات مستقلة معتمدة، إضافة إلى شهادات موردي المواد الخام. ملحق الملف التعريفي · صفحة الأداء الفني.

تقارير المختبرات والاختبارات الفنية

فهرس المستندات

#	المستند	الجهة · التاريخ	الصفحة
	أحدث الاختبارات · 2025		
01	مقاومة الضغط وامتصاص الماء · بلك مصمت 20 سم و10 سم · يطابق ASTM C90 (حامل)	مختبرات الحوطي ستانجر · ASTM C140 · ديسمبر 2025	7–8
02	مقاومة الضغط · بلك مفرّغ 20 سم	مختبرات ASTM C140 / C129 · RGF · أكتوبر 2025	9
03	الضغط وامتصاص الماء ومقاومة الحريق · بلك مصمت 20 سم	مختبرات ACI 216 · ASTM C140 · ACES · مارس 2025	10–12
	الاختبارات الشاملة لجميع المقاسات · 2024		
04	الضغط وامتصاص الماء ومقاومة الحريق · بلك مفرّغ 10 سم	مختبرات ACI 216 · ASTM C140 · ACES · أغسطس 2024	13–15
05	الضغط وامتصاص الماء ومقاومة الحريق · بلك مفرّغ 15 سم	مختبرات ACI 216 · ASTM C140 · ACES · أغسطس 2024	16–18
06	الضغط وامتصاص الماء ومقاومة الحريق · بلك مفرّغ 20 سم	مختبرات ACI 216 · ASTM C140 · ACES · أغسطس 2024	19–21
07	الضغط وامتصاص الماء ومقاومة الحريق · بلك مفرّغ 25 سم	مختبرات ACI 216 · ASTM C140 · ACES · أغسطس 2024	22–24
	الاختبارات الشاملة لجميع المقاسات · 2023		
08	الضغط وامتصاص الماء ومقاومة الحريق · بلك مفرّغ 10 سم	مختبرات ACI 216 · ASTM C140 · ACES · ديسمبر 2023	25–27
09	الضغط وامتصاص الماء ومقاومة الحريق · بلك مفرّغ 15 سم	مختبرات ACI 216 · ASTM C140 · ACES · ديسمبر 2023	28–30
10	الضغط وامتصاص الماء ومقاومة الحريق · بلك مفرّغ 20 سم	مختبرات ACI 216 · ASTM C140 · ACES · ديسمبر 2023	31–33
11	الضغط وامتصاص الماء ومقاومة الحريق · بلك مفرّغ 25 سم	مختبرات ACI 216 · ASTM C140 · ACES · ديسمبر 2023	34–36
12	مقاومة الضغط · بلك سوبر بركاني معزول 25 سم	مختبرات ASTM C140 / C129 · SAFCO · نوفمبر 2023	37
13	مقاومة الحريق · بلك معزول 25 سم · 4 ساعات	مختبرات NCMA TEK · SAFCO · نوفمبر 2023	38
14	مقاومة الحريق · بلك 20 سم · 3 ساعات	مختبرات NCMA TEK · SAFCO · نوفمبر 2023	39
15	مقاومة الحريق · بلك 10 سم	مختبرات NCMA TEK · SAFCO · نوفمبر 2023	40
	اختبارات مقاومة الضغط · 2021–2022		
16	مقاومة الضغط · بلك مفرّغ 25 سم	مختبرات ASTM C140 / C129 · RGF · مايو 2022	41
17	مقاومة الضغط · بلك مفرّغ 20 سم · مشروع SFMC–وزارة الداخلية	مختبرات ASTM C140 / C129 · RGF · مايو 2022	42
18	مقاومة الضغط · بلك مفرّغ 15 و20 و10 سم	مختبرات ASTM C140 / C129 · RGF · نوفمبر 2021	43–45

نسخة للاطلاع فقط | مصنع بلك الرياض
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فهرس المستندات · تابع

#	المستند	الجهة · التاريخ	الصفحة
	الاختبارات الشاملة لجميع المقاسات · ديسمبر 2022		
19	اختبار مقاومة الحريق · بلك مصمت 400×200×200 مم	مختبرات ACES · ACI 216 · ديسمبر 2022	46
20	اختبار امتصاص الماء · بلك مصمت 400×200×200 مم	مختبرات ACES · ASTM C140 · ديسمبر 2022	47
21	اختبار مقاومة الضغط والأبعاد · بلك مصمت 400×200×200 مم	مختبرات ACES · ASTM C140 · ديسمبر 2022	48
22	اختبار مقاومة الحريق · بلك مصمت 400×150×200 مم	مختبرات ACES · ACI 216 · ديسمبر 2022	49
23	اختبار امتصاص الماء · بلك مصمت 400×150×200 مم	مختبرات ACES · ASTM C140 · ديسمبر 2022	50
24	اختبار مقاومة الضغط والأبعاد · بلك مصمت 400×150×200 مم	مختبرات ACES · ASTM C140 · ديسمبر 2022	51
25	اختبار مقاومة الحريق · بلك مصمت 400×100×200 مم	مختبرات ACES · ACI 216 · ديسمبر 2022	52
26	اختبار امتصاص الماء · بلك مصمت 400×100×200 مم	مختبرات ACES · ASTM C140 · ديسمبر 2022	53
27	اختبار مقاومة الضغط والأبعاد · بلك مصمت 400×100×200 مم	مختبرات ACES · ASTM C140 · ديسمبر 2022	54
28	اختبار مقاومة الحريق · بلك مفرّغ معزول 400×300×200 مم	مختبرات ACES · ACI 216 · ديسمبر 2022	55
29	اختبار امتصاص الماء · بلك مفرّغ معزول 400×300×200 مم	مختبرات ACES · ASTM C140 · ديسمبر 2022	56
30	اختبار مقاومة الضغط والأبعاد · بلك مفرّغ معزول 400×300×200 مم	مختبرات ACES · ASTM C140 · ديسمبر 2022	57
31	اختبار مقاومة الحريق · بلك مفرّغ (جهة واحدة) 400×250×200 مم	مختبرات ACES · ACI 216 · ديسمبر 2022	58
32	اختبار امتصاص الماء · بلك مفرّغ (جهة واحدة) 400×250×200 مم	مختبرات ACES · ASTM C140 · ديسمبر 2022	59
33	اختبار مقاومة الضغط والأبعاد · بلك مفرّغ (جهة واحدة) 400×250×200 مم	مختبرات ACES · ASTM C140 · ديسمبر 2022	60
34	اختبار مقاومة الحريق · بلك مفرّغ معزول (جهة واحدة) 400×250×200 مم	مختبرات ACES · ACI 216 · ديسمبر 2022	61
35	اختبار امتصاص الماء · بلك مفرّغ معزول (جهة واحدة) 400×250×200 مم	مختبرات ACES · ASTM C140 · ديسمبر 2022	62
36	اختبار مقاومة الضغط والأبعاد · بلك مفرّغ معزول (جهة واحدة) 400×250×200 مم	مختبرات ACES · ASTM C140 · ديسمبر 2022	63
37	اختبار مقاومة الحريق · بلك مفرّغ (جهة واحدة) 400×200×200 مم	مختبرات ACES · ACI 216 · ديسمبر 2022	64
38	اختبار امتصاص الماء · بلك مفرّغ (جهة واحدة) 400×200×200 مم	مختبرات ACES · ASTM C140 · ديسمبر 2022	65
39	اختبار مقاومة الضغط والأبعاد · بلك مفرّغ (جهة واحدة) 400×200×200 مم	مختبرات ACES · ASTM C140 · ديسمبر 2022	66

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تقارير المختبرات والاختبارات الفنية

فهرس المستندات · تابع

#	المستند	الجهة · التاريخ	الصفحة
40	اختبار مقاومة الحريق · بلك مفرّغ (جهة واحدة) 400×150×200 مم	مختبرات ACI 216 · ACES · ديسمبر 2022	67
41	اختبار امتصاص الماء · بلك مفرّغ (جهة واحدة) 400×150×200 مم	مختبرات ASTM C140 · ACES · ديسمبر 2022	68
42	اختبار مقاومة الضغط والأبعاد · بلك مفرّغ (جهة واحدة) 400×150×200 مم	مختبرات ASTM C140 · ACES · ديسمبر 2022	69
43	اختبار مقاومة الحريق · بلك مفرّغ (جهتين) 400×200×200 مم	مختبرات ACI 216 · ACES · ديسمبر 2022	70
44	اختبار امتصاص الماء · بلك مفرّغ (جهتين) 400×200×200 مم	مختبرات ASTM C140 · ACES · ديسمبر 2022	71
45	اختبار مقاومة الضغط والأبعاد · بلك مفرّغ (جهتين) 400×200×200 مم	مختبرات ASTM C140 · ACES · ديسمبر 2022	72
46	اختبار مقاومة الحريق · بلك مفرّغ (جهتين) 400×150×200 مم	مختبرات ACI 216 · ACES · ديسمبر 2022	73
47	اختبار امتصاص الماء · بلك مفرّغ (جهتين) 400×150×200 مم	مختبرات ASTM C140 · ACES · ديسمبر 2022	74
48	اختبار مقاومة الضغط والأبعاد · بلك مفرّغ (جهتين) 400×150×200 مم	مختبرات ASTM C140 · ACES · ديسمبر 2022	75
	اختبارات مقاومة الضغط والتحليل الكيميائي · 2022–2023		
49	اختبار مقاومة الضغط · ASTM C140 · عينة 1	مختبرات RGF · نوفمبر 2022	76
50	اختبار مقاومة الضغط · ASTM C140 · عينة 2	مختبرات RGF · نوفمبر 2022	77
51	اختبار مقاومة الضغط · ASTM C140 · عينة 3	مختبرات RGF · نوفمبر 2022	78
52	اختبار مقاومة الضغط · ASTM C140 · عينة 4	مختبرات RGF · نوفمبر 2022	79
53	اختبار مقاومة الضغط · ASTM C140 · عينة 4 (نسخة مصدقة)	مختبرات RGF · نوفمبر 2022	80
54	اختبار مقاومة الضغط · مشروع هنجر صيانة الطائرات	مختبرات RGF · يناير 2023	81
55	التحليل الكيميائي لمياه الخلط	مختبرات RGF · نوفمبر 2022	82
	اختبارات العزل الصوتي (STC) · 2019		
56	تقرير العزل الصوتي · بلك مفرّغ 20 سم · STC 47	مختبرات ASTM E90 · ACES · مايو 2019	83–87
57	تقرير العزل الصوتي · بلك مفرّغ 15 سم · STC 45	مختبرات ASTM E90 · ACES · مايو 2019	88–92
	اختبارات 2020–2021		
58	اختبار مقاومة الحريق · بلك مفرّغ	مختبرات ACI 216 · ACES · يونيو 2020	93

نسخة للاطلاع فقط | مصنع بلك الرياض | FOR REFERENCE ONLY · rbf.sa

تقارير المختبرات والاختبارات الفنية

فهرس المستندات · تابع

#	المستند	الجهة · التاريخ	الصفحة
59	اختبار امتصاص الماء · بلك معزول 25 سم	مختبرات ACES · ASTM C140 · يناير 2020	94
60	اختبار امتصاص الماء · بلك مفرّغ 20 سم	مختبرات ACES · ASTM C140 · يناير 2020	95
61	مقاومة الحريق لوحدات البناء · مشروع مستشفى قوى الأمن ذهبان	مختبرات SAFCO · NCMA TEK · فبراير 2021	96
62	مقاومة الحريق لوحدات البناء · ضبط الجودة	مختبرات SAFCO · NCMA TEK · فبراير 2021	97
	اختبارات 2018–2019		
63	مقاومة الحريق لوحدات البناء	مختبرات SAFCO · NCMA TEK · أكتوبر 2019	98
64	مقاومة الضغط · هوردي بركاني	مختبرات SAFCO · ASTM C129 · ديسمبر 2019	99
65	مقاومة الحريق وامتصاص الماء · هوردي بركاني	مختبرات SAFCO · NCMA TEK · ديسمبر 2019	100–101
66	مقاومة الضغط · بلك 20 سم · يطابق ASTM C90 (حامل)	مختبرات SAFCO · ASTM C90 · ديسمبر 2019	102
67	مقاومة الحريق · بلك مصمت 10 سم	مختبرات ACES · مارس 2018	103
68	اختبار التوصيل الحراري · بلك معزول (عازل 5 سم)	مختبرات SAFCO · ASTM D5334 · يناير 2018	104
69	اختبار التوصيل الحراري · بلك معزول (عازل 7 سم)	مختبرات SAFCO · ASTM D5334 · يناير 2018	105
70	اختبار التوصيل الحراري · بلك معزول (عازل 5.5 سم)	مختبرات SAFCO · ASTM D5334 · يناير 2018	106
71	مقاومة الضغط لوحدات البناء · ASTM C90	مختبرات SAFCO · يناير 2018	107
	اختبارات 2017		
72	تقرير العزل الصوتي (STC) · بلك 20 سم	مختبرات GECO · ASTM E413 · ديسمبر 2017	108–110
73	حساب مقاومة الحريق · بلك بركاني 20 سم	آركي بلان · د. عبدالله بخاري · أكتوبر 2017	111
74	اختبار المقاومة الحرارية · بلك بركاني مفرّغ	آركي بلان · د. عبدالله بخاري · مايو 2017	112
	شهادات الموردين ومواد الخام		
75	شهادة مطابقة الإسمنت · SASO 1914 / ASTM C150	شركة أبناء عبد الرحمن الصبحي · إسمنت رابغ · يناير 2018	113
76	شهادة مطابقة شرائح العزل الحراري (بوليسترين)	الشركة العربية الكيماوية المحدودة (ACC) · نوفمبر 2017	114
77	المواصفات الفنية لشرائح العزل الحراري داخل البلك	الشركة العربية الكيماوية المحدودة (ACC) · نشرة فنية	115–119

نسخة للاطلاع فقط · مصنع بلك الرياض
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تقارير المختبرات والاختبارات الفنية

فهرس المستندات · تابع

#	المستند	الجهة · التاريخ	الصفحة
78	شهادة جودة مواد العزل (EPS) الموردة للمصنع	المصنع الوطني لصناعة البوليسترين (Styrenpack)	120
79	تقرير التحليل المخبري للمياه	مصنع الري للمياه · يناير 2018	121

نسخة للاطلاع فقط · مصنع بلك الرياض
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مقاومة الضغط وامتصاص الماء · بلك مصمت 20 سم و10 سم · يطابق ASTM C90 (حامل) · صفحة 1 من 2

تقرير اختبار

مختبرات الحوطي ستانجر · ASTM C140 · ديسمبر 2025

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AL HOTY-STANGER — الحوطي ALHOTY — ستانجر STANGER

TEST REPORT

CONCRETE MASONRY UNITS

Test Method : ASTM C140/C140M-24a

Reporting Date: December 16, 2025
Report No. :JDCSD2500993/1
Page: 1 of 1

Client Name	:	AL RIYADH BLOCK FACTORY
Project	:	Jeddah Logistic Park - Package 01
Sample Description	:	Solid Block
Nominal Size (L x W x H)	:	400 x 200 x 200 mm
Date Sample Received	:	9-Dec-25
Date of Test	:	16-Dec-25
Sampling Done By	:	Client

TEST RESULTS

	TEST PARAMETERS		UNIT	TEST RESULTS				Required Limits ASTM C90-14 Normal weight Class (200mm) Load Bearing	Required Limits ASTM C129-14a Normal weight Class (200mm) Non-Load Bearing
				1	2	3	Ave.		
1)	Face Shell Thickness		mm	-	-	-	-	32 Min.	NA
2)	Web		mm	-	-	-	-	19 Min.	NA
3)	Weight as received		g	33714	34660	35013	**34462**	-	-
4)	Density		Kg/m^3	2340	2360	2360	**2353**	> 2000	> 2000
5)	Water Absorption		%	3.6	3.1	3.3	**3.3**	NA	NA
			Kg/m^3	83.9	73.0	76.9	**78**	208 Max.	NA
6)	Compressive Strength	Net	N/mm^2	18.1	19.2	17.3	**18.2**	13.8 Min.	4.14 Min.

FADI KHALIFA
Regional Manager (A) - WR
Admin
For AL HOTY - STANGER LTD.CO.

MOHAMMED OWAIS ALI
Technical Manager
Civil Testing Department

Test Method Variation: NONE

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F-5

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مقاومة الضغط وامتصاص الماء · بلك مصمت 20 سم و10 سم · يطابق ASTM C90 (حامل) · صفحة 2 من 2

مختبرات الحوطي ستانجر · ASTM C140 · ديسمبر 2025

تقرير اختبار

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AL HOTY-STANGER (الحوطي ALHOTY ستانجر STANGER)

TEST REPORT

CONCRETE MASONRY UNITS

Test Method : ASTM C140/C140M-24a

Reporting Date: December 16, 2025
Report No. :JDCSD2500993/2
Page: 1 of 1

Client Name	:	AL RIYADH BLOCK FACTORY
Project	:	Jeddah Logistic Park - Package 01
Sample Description	:	Solid Block
Nominal Size (L x W x H)	:	400 x 100 x 200 mm
Date Sample Received	:	9-Dec-25
Date of Test	:	16-Dec-25
Sampling Done By	:	Client

TEST RESULTS

TEST PARAMETERS			UNIT	TEST RESULTS				Required Limits	
								ASTM C90-14	ASTM C129-14a
								Normal weight Class (200mm)	
				1	2	3	Ave.	Load Bearing	Non-Load Bearing
1)	Face Shell Thickness		mm	-	-	-	-	32 Min.	NA
2)	Web		mm	-	-	-	-	19 Min.	NA
3)	Weight as received		g	17143	17045	17360	**17183**	-	-
4)	Density		Kg/m^3	2310	2340	2320	**2323**	> 2000	> 2000
5)	Water Absorption		%	4.0	4.8	4.9	**4.6**	NA	NA
			Kg/m^3	91.4	112.8	114.8	**106**	208 Max.	NA
6)	Compressive Strength	Net	N/mm^2	21.3	17.0	17.8	**18.7**	13.8 Min.	4.14 Min.

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Admin
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Technical Manager
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Test Method Variation: NONE

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مقاومة الضغط · بلك مفرّغ 20 سم

مختبرات ASTM C140 / C129 · RGF · أكتوبر 2025

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RIYADH GEOTECHNIQUE & FOUNDATIONS CO.
CR 1010166286 Limited Liability Company / Capital 6,000,000 S.R.

P.O. Box 9182, Jeddah 21413, KSA Telephone: +966 (12) 6715621 / 6176860 Fax: +966 (12) 6715426
Email: rgf-wp@erigeosciences.com
Location: Garnatha St. near Arbaeen St. intersection, Mushrefah District, Jeddah

TEST REPORT
CONCRETE BLOCK TEST RESULTS
ASTM C140/C140M-24

CLIENT	: Riyadh Block Factory	LAB. REF. NO. :	25/001110/PJ
PROJECT	: International Contracting Company	REPORT DATE :	14.10.2025
SAMPLE SOURCE:	Riyadh Block Factory	TEST START DATE :	13.10.2025
SAMPLING DATE :	13.10.2025	TEST FINISH DATE :	13.10.2025
SAMPLED BY :	Client	SAMPLING METHOD :	-
DESCRIPTION OF SAMPLE :	(400x200x200mm) Hollow Block	TEST DURATION :	1 Days
SAMPLE NO. :	-		

Required Limit
ASTM C129
Normal Weight Class
Non Load Bearing

			1	2	3	
REFERENCE No.						
FACE SHELL THICKNESS		mm	23	23	23	
WEB THICKNESS		mm	23	23	23	
DIMENSIONS (mm)	LENGTH	(L)	400	400	400	
	WIDTH	(W)	200	200	200	
	HEIGHT	(H)	200	200	200	
AREA GROSS (cm^2)	GROSS		800.0	800.0	800.0	
AREA NET (cm^2)	NET		423.0	423.0	423.0	
LOAD (kN)			393.6	380.0	379.7	
GROSS CRUSHING STRENGTH		(MPa)	4.92	4.75	4.75	
NET CRUSHING STRENGTH		(MPa)	9.30	8.98	8.98	
AVERAGE STRENGTH (GROSS) =			4.81 MPa			3.45 Mpa Min. Individual Unit 4.14 Mpa Min. Avg of 3 Units
AVERAGE STRENGTH (NET) =			9.09 MPa			

REMARKS : 1- Non Load bearing concrete masonry units with 07 No's of hollow one end is open.
2- The specimens were supplied by the client.

NOTE : Result is related to the sample tested. The Lab is reponsible for all information in the report, except the information provided by the Client.

TESTED BY : Faiyaz

CHECKED BY/REVIEWED BY : Syed Asad Abbas

APPROVED BY :

RIYADH GEOTECHNIQUE & FOUNDATIONS

End of Report

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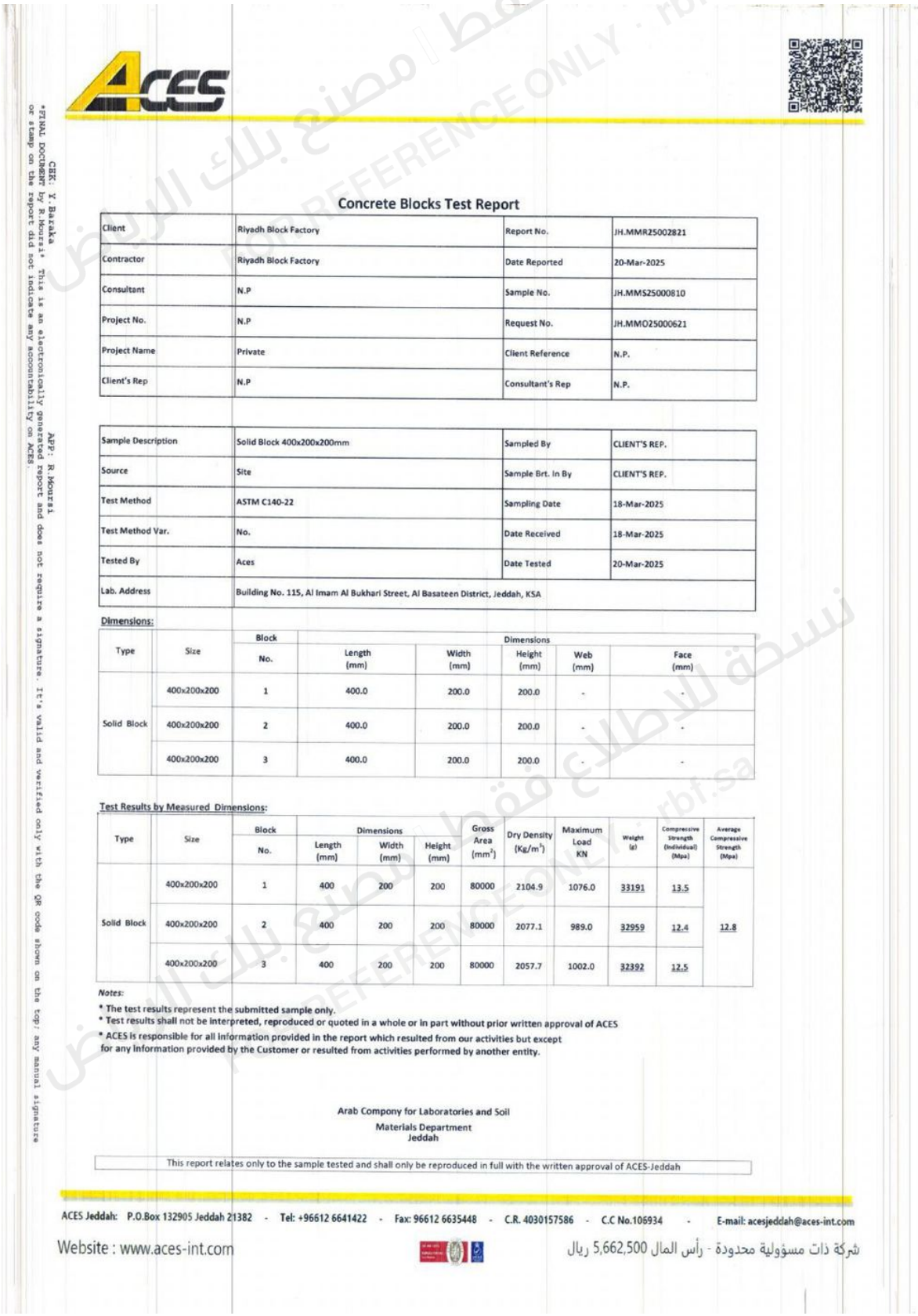
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15.08.2025

Sheet 1 of 1

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Concrete Blocks Test Report

Client	Riyadh Block Factory	Report No.	JH.MMR25002821
Contractor	Riyadh Block Factory	Date Reported	20-Mar-2025
Consultant	N.P	Sample No.	JH.MMS25000810
Project No.	N.P	Request No.	JH.MMO25000621
Project Name	Private	Client Reference	N.P.
Client's Rep	N.P	Consultant's Rep	N.P.

Sample Description	Solid Block 400x200x200mm	Sampled By	CLIENT'S REP.
Source	Site	Sample Brt. In By	CLIENT'S REP.
Test Method	ASTM C140-22	Sampling Date	18-Mar-2025
Test Method Var.	No.	Date Received	18-Mar-2025
Tested By	Aces	Date Tested	20-Mar-2025
Lab. Address	Building No. 115, Al Imam Al Bukhari Street, Al Basateen District, Jeddah, KSA		

Dimensions:

Type	Size	Block No.	Dimensions Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Solid Block	400x200x200	1	400.0	200.0	200.0	-	-
	400x200x200	2	400.0	200.0	200.0	-	-
	400x200x200	3	400.0	200.0	200.0	-	-

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions Length (mm)	Width (mm)	Height (mm)	Gross Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)	Average Compressive Strength (Mpa)
Solid Block	400x200x200	1	400	200	200	80000	2104.9	1076.0	33191	13.5	
	400x200x200	2	400	200	200	80000	2077.1	989.0	32959	12.4	12.8
	400x200x200	3	400	200	200	80000	2057.7	1002.0	32392	12.5	

Notes:

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Concrete Block Test Report For Water Absorption

Client	Riyadh Block Factory	Report No.	JH.MMR25002821
Contractor	Riyadh Block Factory	Date Reported	20/03/2025
Consultant	N.P	Sample No.	JH.MMS25000810
Project No.	N.P	Request No.	JH.MMO25000621
Project Name	Private	Client Reference	N.P.

Sample Description	Solid Block 400x200x200mm	Sampled By	CLIENT'S REP.
Source	Site	Sample Brt. In By	CLIENT'S REP.
Test Method	ASTM C140-22	Date Received	18/03/2025
Tested By	No.	Date Tested	20/03/2025
Lab. Address	Building No. 115, Al Imam Al Bukhari Street, Al Basateen District, Jeddah, KSA		

Test Results Of Water Absorption:

Type	Block No.	Dimensions			Dry Wg.	SSD Wg.	Water Absorption %
		Length (mm)	Width (mm)	Height (mm)			
Solid Block	1	400.0	200.0	200.0	33191	34292	3.3
	2	400.0	200.0	200.0	32959	34001	3.2
	3	400.0	200.0	200.0	32392	33513	3.5

Notes:

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Concrete Block Test Report For Fire Resistance

Client	Riyadh Block Factory	**Report No.**	JH.MMR25002821
Contractor	Riyadh Block Factory	**Date Reported**	20/03/2025
Consultant	N.P	**Sample No.**	JH.MMS25000810
Project No.	N.P	**Request No.**	JH.MMO25000621
Project Name	Private	**Client Reference**	N.P.

Sample Description	Solid Block 400x200x200mm	**Sampled By**	CLIENT'S REP.
Source	Site	**Sampling Date**	18-Mar-2025
Test Method	ACI 216 (Calculation Method)	**Sample Brt. In By**	CLIENT'S REP.
Test Method Var.	No.	**Date Received**	18-Mar-2025
Tested By	Aces	**Date Tested**	20-Mar-2025
Lab. Address	Building No. 115, Al Imam Al Bukhari Street, Al Basateen District, Jeddah, KSA		

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Solid Block	1	400	200	200	-	-	5.2
	2	400	200	200	-	-	5.3
	3	400	200	200	-	-	5.3

Notes:

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Concrete Blocks Test Report

Client	Riyadh block factory	Report No.	JH.MMR24005895
Contractor	Riyadh block factory	Date Reported	11/08/2024
Consultant	N.P	Sample No.	JH.MMS24001346
Project No.	N.P	Oder No.	JH.MMO24001004
Project Name	Private	Client Reference	N.P.

Sample Description	400x100x200 mm - Hollow Block	Sample ID	1/1
Supplier	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sample Brt. In By	ACES's Rep.
Test Method	ASTM C140	Sampling Date	15/07/2024
Test Method Var.	N.P	Date Received	15/07/2024
Tested By	ACES's Rep.	Date Tested	16/07/2024

Dimensions:

Type	Size	Block No.	Dimensions Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Hollow Block	400x100x200	1	400.0	100.0	200.0	25.4	24.1
	400x100x200	2	400.0	100.0	200.0	25.5	26.6
	400x100x200	3	400.0	100.0	200.0	25.5	25.9

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions Length (mm)	Width (mm)	Height (mm)	Gross Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)
Hollow Block	400x100x200	1	400	100	200	40000	2132.4	342.6	11300	8.6
	400x100x200	2	400	100	200	40000	2156.3	363.3	12042	9.1
	400x100x200	3	400	100	200	40000	2154.0	362.1	11643	9.1
Average										8.9

Notes

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Concrete Block Test Report For Water Absorption

Client	Riyadh block factory	**Report No.**	JH.MMR24005895
Contractor	Riyadh block factory	**Date Reported**	11-Aug-2024
Consultant	N.P	**Sample No.**	JH.MMS24001346
Project No.	N.P.	**Order No.**	JH.MMO24001004
Project Name	Private	**Client Reference**	Verbal

Sample Description	400x100x200 mm - Hollow Block	**Sample ID**	1/1
Supplier	N.P	**Sampled By**	ACES's Rep.
Location	Jeddah	**Sample Brt. In By**	ACES's Rep.
Test Method	ASTM C140/C140M-20a	**Date Received**	15-Jul-2024
Tested By	ACES	**Date Tested**	17-Jul-2024

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Hollow Block	1	400.0	100.0	200.0	11300	11822	4.6
	2	400.0	100.0	200.0	12042	12570	4.4
	3	400.0	100.0	200.0	11643	12166	4.5

Notes:-
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Concrete Block Test Report For Fire Resistance

Client	Riyadh block factory	**Report No.**	JH.MMR24005895
Contractor	Riyadh block factory	**Date Reported**	11-Aug-2024
Consultant	N.P	**Sample No.**	JH.MMS24001346
Project No.	N.P	**temporary reference number**	JH.MMO24001004
Project Name	Private	**Client Reference**	Verbal

Sample Description	400x100x200 mm - Hollow Block	**Sample ID**	1/1
Sample Description	N.P	**Sampled By**	Client Rep.
Location	Jeddah	**Sampling Date**	15-Jul-2024
Test Method	ACI 216 (Calculation Method)	**Sample Brt. In By**	Client Rep.
Test Method Var.	N.P	**Date Received**	15-Jul-2024
Tested By	ACES' Rep	**Date Tested**	17-Jul-2024

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Hollow Block	1	400	100	200	25.4	24.1	1
	2	400	100	200	25.5	26.6	1
	3	400	100	200	25.5	25.9	1
						Average	1

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Concrete Blocks Test Report

Client	Riyadh block factory	Report No.	JH.MMR24005895
Contractor	Riyadh block factory	Date Reported	11/08/2024
Consultant	N.P	Sample No.	JH.MMS24001346
Project No.	N.P	Order No.	JH.MMO24001004
Project Name	Private	Client Reference	N.P.

Sample Description	400x150x200 mm - Hollow Block	Sample ID	2/1
Supplier	N.P	Sampled By	Client Rep.
Location	Jeddah	Sample Brt. In By	Client Rep.
Test Method	ASTM C140	Sampling Date	15/07/2024
Test Method Var.	N.P	Date Received	15/07/2024
Tested By	ACES's Rep.	Date Tested	16/07/2024

Dimensions:

Type	Size	Block No.	Dimensions				
			Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Hollow Block	400x150x200	1	400.0	150.0	200.0	25.4	27.1
	400x150x200	2	400.0	150.0	200.0	25.4	25.8
	400x150x200	3	400.0	150.0	200.0	25.5	25.9

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions			Gross Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)
			Length (mm)	Width (mm)	Height (mm)					
Hollow Block	400x150x200	1	400	150	200	60000	2225.5	422.7	16254	7.0
	400x150x200	2	400	150	200	60000	2169.4	438.4	16172	7.3
	400x150x200	3	400	150	200	60000	2129.2	425.0	16080	7.1
Average										7.1

Notes

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Concrete Block Test Report For Water Absorption

Client	Riyadh block factory	**Report No.**	JH.MMR24005895
Contractor	Riyadh block factory	**Date Reported**	11-Aug-2024
Consultant	N.P	**Sample No.**	JH.MMS24001346
Project No.	N.P.	**Order No.**	JH.MMO24001004
Project Name	Private	**Client Reference**	Verbal

Sample Description	400x150x200 mm - Hollow Block	**Sample ID**	2/1
Supplier	N.P	**Sampled By**	Client Rep.
Location	Jeddah	**Sample Brt. In By**	Client Rep.
Test Method	ASTM C140/C140M-20a	**Date Received**	15-Jul-2024
Tested By	ACES	**Date Tested**	17-Jul-2024

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Hollow Block	1	400.0	150.0	200.0	16254	16903	4.0
	2	400.0	150.0	200.0	16172	16854	4.2
	3	400.0	150.0	200.0	16080	16731	4.0

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Concrete Block Test Report For Fire Resistance

Client	Riyadh block factory	**Report No.**	JH.MMR24005895
Contractor	Riyadh block factory	**Date Reported**	11-Aug-2024
Consultant	N.P	**Sample No.**	JH.MMS24001346
Project No.	N.P	**Order No.**	JH.MMO24001004
Project Name	Private	**Client Reference**	Verbal

Sample Description	400x150x200 mm - Hollow Block	**Sample ID**	2/1
Sample Description	N.P	**Sampled By**	Client Rep.
Location	Jeddah	**Sampling Date**	15-Jul-2024
Test Method	ACI 216 (Calculation Method)	**Sample Brt. In By**	Client Rep.
Test Method Var.	N.P	**Date Received**	15-Jul-2024
Tested By	ACES' Rep	**Date Tested**	17-Jul-2024

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Hollow Block	1	400	150	200	25.4	27.1	2
	2	400	150	200	25.4	25.8	2
	3	400	150	200	25.5	25.9	2
						Average	2

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Concrete Blocks Test Report

Client	Riyadh block factory	Report No.	JH.MMR24005895
Contractor	Riyadh block factory	Date Reported	11/08/2024
Consultant	N.P	Sample No.	JH.MMS24001346
Project No.	N.P	Order No.	JH.MMO24001004
Project Name	Private	Client Reference	N.P.

Sample Description	400x200x200 mm - Hollow Block	Sample ID	3/1
Supplier	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sample Brt. In By	ACES's Rep.
Test Method	ASTM C140	Sampling Date	15/07/2024
Test Method Var.	N.P	Date Received	15/07/2024
Tested By	ACES's Rep.	Date Tested	16/07/2024

Dimensions:

Type	Size	Block No.	Dimensions				
			Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Hollow Block	400x200x200	1	400.0	200.0	200.0	31.3	32.1
	400x200x200	2	400.0	200.0	200.0	31.4	32.1
	400x200x200	3	400.0	200.0	200.0	30.9	32.0

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions			Gross Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)
			Length (mm)	Width (mm)	Height (mm)					
Hollow Block	400x200x200	1	400	200	200	80000	2272.6	693.5	22189	8.7
	400x200x200	2	400	200	200	80000	2071.0	713.0	23039	8.9
	400x200x200	3	400	200	200	80000	2094.7	663.8	22759	8.3
Average										8.6

Notes

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Concrete Block Test Report For Water Absorption

Client	Riyadh block factory	**Report No.**	JH.MMR24005895
Contractor	Riyadh block factory	**Date Reported**	11-Aug-2024
Consultant	N.P	**Sample No.**	JH.MMS24001346
Project No.	N.P.	**temporary reference number**	JH.MMO24001004
Project Name	Private	**Client Reference**	Verbal

Sample Description	400x200x200 mm - Hollow Block	**Sample ID**	3/1
Supplier	N.P	**Sampled By**	ACES's Rep.
Location	Jeddah	**Sample Brt. In By**	ACES's Rep.
Test Method	ASTM C140/C140M-20a	**Date Received**	15-Jul-2024
Tested By	ACES	**Date Tested**	17-Jul-2024

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Hollow Block	1	400.0	200.0	200.0	22189	23015	3.7
	2	400.0	200.0	200.0	23039	23888	3.7
	3	400.0	200.0	200.0	22759	23633	3.8

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Concrete Block Test Report For Fire Resistance

Client	Riyadh block factory	**Report No.**	JH.MMR24005895
Contractor	Riyadh block factory	**Date Reported**	11-Aug-2024
Consultant	N.P	**Sample No.**	JH.MMS24001346
Project No.	N.P	**temporary reference number**	JH.MMO24001004
Project Name	Private	**Client Reference**	Verbal

Sample Description	400x200x200 mm - Hollow Block	**Sample ID**	3/1
Sample Description	N.P	**Sampled By**	ACES's Rep.
Location	Jeddah	**Sampling Date**	15-Jul-2024
Test Method	ACI 216 (Calculation Method)	**Sample Brt. In By**	ACES's Rep.
Test Method Var.	N.P	**Date Received**	15-Jul-2024
Tested By	ACES' Rep	**Date Tested**	16-Jul-2024

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Hollow Block	1	400	200	200	31.3	32.1	3
	2	400	200	200	31.4	32.1	3
	3	400	200	200	30.9	32.0	3
						Average	3

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Concrete Blocks Test Report

Client	Riyadh block factory	Report No.	JH.MMR24005895
Contractor	Riyadh block factory	Date Reported	11-Aug-2024
Consultant	N.P	Sample No.	JH.MMS24001346
Project No.	N.P	Order No.	JH.MMO24001004
Project Name	Private	Client Reference	N.P.

Sample Description	400x250x200 mm - Hollow Block	Sample ID	4/1
Supplier	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sample Brt. In By	ACES's Rep.
Test Method	ASTM C140	Sampling Date	15/07/2024
Test Method Var.	N.P	Date Received	15/07/2024
Tested By	ACES's Rep.	Date Tested	16/07/2024

Dimensions:

Type	Size	Block No.	Dimensions				
			Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Hollow Block	400x250x200	1	400.0	250.0	200.0	23.6	25.0
	400x250x200	2	400.0	250.0	200.0	23.2	25.5
	400x250x200	3	400.0	250.0	200.0	23.2	25.2

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions			Gross Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)
			Length (mm)	Width (mm)	Height (mm)					
Hollow Block	400x250x200	1	400	250	200	100000	2201.3	445.0	21552	8.7
	400x250x200	2	400	250	200	100000	1977.5	494.9	21015	8.9
	400x250x200	3	400	250	200	100000	2036.6	468.0	21254	8.3
Average										8.6

Notes

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Concrete Block Test Report For Water Absorption

Client	Riyadh block factory	**Report No.**	JH.MMR24005895
Contractor	Riyadh block factory	**Date Reported**	11-Aug-2024
Consultant	N.P	**Sample No.**	JH.MMS24001346
Project No.	N.P.	**temporary reference number**	JH.MMO24001004
Project Name	Private	**Client Reference**	Verbal

Sample Description	400x250x200 mm - Hollow Block	**Sample ID**	4/1
Supplier	N.P	**Sampled By**	ACES's Rep.
Location	Jeddah	**Sample Brt. In By**	ACES's Rep.
Test Method	ASTM C140/C140M-20a	**Date Received**	15-Jul-2024
Tested By	ACES	**Date Tested**	17-Jul-2024

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Hollow Block	1	400.0	250.0	200.0	21552	22340	3.7
	2	400.0	250.0	200.0	21015	21811	3.8
	3	400.0	250.0	200.0	21254	22022	3.6

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Concrete Block Test Report For Fire Resistance

Client	Riyadh block factory	**Report No.**	JH.MMR24005895
Contractor	Riyadh block factory	**Date Reported**	11-Aug-2024
Consultant	N.P	**Sample No.**	JH.MMS24001346
Project No.	N.P	**temporary reference number**	JH.MMO24001004
Project Name	Private	**Client Reference**	Verbal

Sample Description	400x250x200 mm - Hollow Block	**Sample ID**	4/1
Sample Description	N.P	**Sampled By**	ACES's Rep.
Location	Jeddah	**Sampling Date**	15-Jul-2024
Test Method	ACI 216 (Calculation Method)	**Sample Brt. In By**	ACES's Rep.
Test Method Var.	N.P	**Date Received**	15-Jul-2024
Tested By	ACES' Rep	**Date Tested**	16-Jul-2024

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Hollow Block	1	400	250	200	23.6	25.0	3
	2	400	250	200	23.2	25.5	3
	3	400	250	200	23.2	25.2	3
						Average	3

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Concrete Blocks Test Report

Client	Riyadh Block Factory	Report No.	JH.MMR23006585
Contractor	Riyadh Block Factory	Date Reported	7-Dec-2023
Consultant	N.P	Sample No.	JH.MMS23002620
Project No.	N.P	Request No.	JH.MMO23001980
Project Name	Private	Client Reference	N.P.
Client's Rep	N.P	Consultant's Rep	N.P.

Sample Description	Hollow Block 200mm,100mm,400mm	Sampled By	CLIENT'S REP.
Source	ABV Rock	Sample Brt. In By	CLIENT'S REP.
Test Method	ASTM C140-22	Sampling Date	22-Nov-2023
Test Method Var.	N.P	Date Received	22-Nov-2023
Tested By	Aces	Date Tested	23-Nov-2023
Lab. Address	Building No. 115, Al Imam Al Bukhari Street, Al Basateen District, Jeddah, KSA		

Dimensions:

Type	Size	Block No.	Dimensions				
			Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Hollow Block	400x100x200	1	400.0	100.0	200.0	21.7	24.9
	400x100x200	2	400.0	100.0	200.0	22.2	24.3
	400x100x200	3	400.0	100.0	200.0	25.9	25.2

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions			Net Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)	Average Compressive Strength (Mpa)
			Length (mm)	Width (mm)	Height (mm)						
Hollow Block	400x100x200	1	400	100	200	25730	2273.8	279.6	11870	10.9	10.9
	400x100x200	2	400	100	200	26725	2284.4	301.5	12368	11.3	
	400x100x200	3	400	100	200	27065	2304.3	286.8	12637	10.6	

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Concrete Block Test Report For Water Absorption

Client	Riyadh Block Factory	**Report No.**	JH.MMR23006585
Contractor	Riyadh Block Factory	**Date Reported**	07/12/2023
Consultant	N.P	**Sample No.**	JH.MMS23002620
Project No.	N.P	**Request No.**	JH.MMO23001980
Project Name	Private	**Client Reference**	N.P.

Sample Description	Hollow Block 200mm,100mm,400mm	**Sampled By**	CLIENT'S REP.
Source	ABV Rock	**Sample Brt. In By**	CLIENT'S REP.
Test Method	ASTM C140-22	**Date Received**	22/11/2023
Tested By	N.P	**Date Tested**	22/11/2023
Lab. Address	Building No. 115, Al Imam Al Bukhari Street, Al Basateen District, Jeddah, KSA		

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Hollow Block	1	400.0	100.0	200.0	11870	12676	6.8
	2	400.0	100.0	200.0	12368	13181	6.6
	3	400.0	100.0	200.0	12637	13440	6.4

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Concrete Block Test Report For Fire Resistance

Client	Riyadh Block Factory	**Report No.**	JH.MMR23006585
Contractor	Riyadh Block Factory	**Date Reported**	07/12/2023
Consultant	N.P	**Sample No.**	JH.MMS23002620
Project No.	N.P	**Request No.**	JH.MMO23001980
Project Name	Private	**Client Reference**	N.P.

Sample Description	Hollow Block 200mm,100mm,400mm	**Sampled By**	CLIENT'S REP.
Source	ABV Rock	**Sampling Date**	22-Nov-2023
Test Method	ACI 216 (Calculation Method)	**Sample Brt. In By**	CLIENT'S REP.
Test Method Var.	N.P	**Date Received**	22-Nov-2023
Tested By	Aces	**Date Tested**	23-Nov-2023
Lab. Address	Building No. 115, Al Imam Al Bukhari Street, Al Basateen District, Jeddah, KSA		

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Hollow Block	1	400	100	200	21.7	24.9	1.0
	2	400	100	200	22.2	24.3	1.1
	3	400	100	200	25.9	25.2	1.0

Notes:

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مختبرات ACI 216 · ASTM C140 · ACES · ديسمبر 2023

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CHK: Y.Baraka

APP: R.Moursi

Concrete Blocks Test Report

Client	Riyadh Block Factory	Report No.	JH.MMR23006581
Contractor	Riyadh Block Factory	Date Reported	7-Dec-2023
Consultant	n.p	Sample No.	JH.MMS23002619
Project No.	n.p	Request No.	JH.MMO23001980
Project Name	Private	Client Reference	N.P.
Client's Rep	n.p	Consultant's Rep	N.P.

Sample Description	Hollow Block 200mm,150mm,400mm	Sampled By	CLIENT'S REP.
Source	ABV Rock	Sample Brt. In By	CLIENT'S REP.
Test Method	ASTM C140-22	Sampling Date	22-Nov-2023
Test Method Var.	n.p	Date Received	22-Nov-2023
Tested By	Aces	Date Tested	23-Nov-2023
Lab. Address	Building No. 115, Al Imam Al Bukhari Street, Al Basateen District, Jeddah, KSA		

Dimensions:

Type	Size	Block No.	Dimensions Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Hollow Block	400x150x200	1	400.0	150.0	200.0	27.8	32.0
	400x150x200	2	400.0	150.0	200.0	26.6	33.0
	400x150x200	3	400.0	150.0	200.0	28.5	32.0

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions Length (mm)	Width (mm)	Height (mm)	Net Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)	Average Compressive Strength (Mpa)
Hollow Block	400x150x200	1	400	150	200	34810	2173.1	403.5	15283	11.6	11.6
	400x150x200	2	400	150	200	34330	2177.0	422.1	15106	12.3	
	400x150x200	3	400	150	200	38040	2101.6	409.1	16146	10.8	

Notes:

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Concrete Block Test Report For Water Absorption

Client	Riyadh Block Factory	**Report No.**	JH.MMR23006581
Contractor	Riyadh Block Factory	**Date Reported**	07/12/2023
Consultant	n.p	**Sample No.**	JH.MMS23002619
Project No.	n.p	**Request No.**	JH.MMO23001980
Project Name	Private	**Client Reference**	N.P.

Sample Description	Hollow Block 200mm,150mm,400mm	**Sampled By**	CLIENT'S REP.
Source	ABV Rock	**Sample Brt. In By**	CLIENT'S REP.
Test Method	ASTM C140-22	**Date Received**	22/11/2023
Tested By	n.p	**Date Tested**	22/11/2023
Lab. Address	Building No. 115, Al Imam Al Bukhari Street, Al Basateen District, Jeddah, KSA		

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Hollow Block	1	400.0	150.0	200.0	15283	16039	4.9
	2	400.0	150.0	200.0	15106	15907	5.3
	3	400.0	150.0	200.0	16146	16955	5.0

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Concrete Block Test Report For Fire Resistance

Client	Riyadh Block Factory	**Report No.**	JH.MMR23006581
Contractor	Riyadh Block Factory	**Date Reported**	07/12/2023
Consultant	n.p	**Sample No.**	JH.MMS23002619
Project No.	n.p	**Request No.**	JH.MMO23001980
Project Name	Private	**Client Reference**	N.P.

Sample Description	Hollow Block 200mm,150mm,400mm	**Sampled By**	CLIENT'S REP.
Source	ABV Rock	**Sampling Date**	22-Nov-2023
Test Method	ACI 216 (Calculation Method)	**Sample Brt. In By**	CLIENT'S REP.
Test Method Var.	n.p	**Date Received**	22-Nov-2023
Tested By	Aces	**Date Tested**	23-Nov-2023
Lab. Address	Building No. 115, Al Imam Al Bukhari Street, Al Basateen District, Jeddah, KSA		

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Hollow Block	1	400	150	200	27.8	32.0	1.4
	2	400	150	200	26.6	33.0	1.4
	3	400	150	200	28.5	32.0	1.7
						Average	1.50

Notes:

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APP: R.Moursi

Concrete Blocks Test Report

Client	Riyadh Block Factory	Report No.	JH.MMR23006591
Contractor	Riyadh Block Factory	Date Reported	7-Dec-2023
Consultant	n.p	Sample No.	JH.MMS23002618
Project No.	n.p	Request No.	JH.MMO23001980
Project Name	Private	Client Reference	N.P.
Client's Rep	n.p	Consultant's Rep	N.P.

Sample Description	Hollow Block 200mm,200mm,400mm	Sampled By	CLIENT'S REP.
Source	ABV Rock	Sample Brt. In By	CLIENT'S REP.
Test Method	ASTM C140-22	Sampling Date	22-Nov-2023
Test Method Var.	n.p	Date Received	22-Nov-2023
Tested By	Aces	Date Tested	23-Nov-2023
Lab. Address	Building No. 115, Al Imam Al Bukhari Street, Al Basateen District, Jeddah, KSA		

Dimensions:

Type	Size	Block No.	Dimensions Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Hollow Block	400x200x200	1	400.0	200.0	200.0	27.8	32.0
	400x200x200	2	400.0	200.0	200.0	28.9	32.0
	400x200x200	3	400.0	200.0	200.0	29.1	32.5

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions Length (mm)	Width (mm)	Height (mm)	Net Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)	Average Compressive Strength (Mpa)
Hollow Block	400x200x200	1	400	200	200	43230	2423.9	591.2	21106	13.7	13.7
	400x200x200	2	400	200	200	44435	2403.6	613.7	21512	13.8	
	400x200x200	3	400	200	200	44925	2435.4	597.6	22029	13.3	

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Concrete Block Test Report For Water Absorption

Client	Riyadh Block Factory	**Report No.**	JH.MMR23006591
Contractor	Riyadh Block Factory	**Date Reported**	07/12/2023
Consultant	n.p	**Sample No.**	JH.MMS23002618
Project No.	n.p	**Request No.**	JH.MMO23001980
Project Name	Private	**Client Reference**	N.P.

Sample Description	Hollow Block 200mm,200mm,400mm	**Sampled By**	CLIENT'S REP.
Source	ABV Rock	**Sample Brt. In By**	CLIENT'S REP.
Test Method	ASTM C140-22	**Date Received**	22/11/2023
Tested By	n.p	**Date Tested**	22/11/2023
Lab. Address	Building No. 115, Al Imam Al Bukhari Street, Al Basateen District, Jeddah, KSA		

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Hollow Block	1	400.0	200.0	200.0	21106	21917	3.8
	4	400.0	200.0	200.0	21512	22316	3.7
	5	400.0	200.0	200.0	22029	22836	3.7

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Concrete Block Test Report For Fire Resistance

Client	Riyadh Block Factory	**Report No.**	JH.MMR23006591
Contractor	Riyadh Block Factory	**Date Reported**	07/12/2023
Consultant	n.p	**Sample No.**	JH.MMS23002618
Project No.	n.p	**Request No.**	JH.MMO23001980
Project Name	Private	**Client Reference**	N.P.
Sample Description	Hollow Block 200mm,200mm,400mm	**Sampled By**	CLIENT'S REP.
Source	ABV Rock	**Sampling Date**	22-Nov-2023
Test Method	ACI 216 (Calculation Method)	**Sample Brt. In By**	CLIENT'S REP.
Test Method Var.	n.p	**Date Received**	22-Nov-2023
Tested By	Aces	**Date Tested**	23-Nov-2023
Lab. Address	Building No. 115, Al Imam Al Bukhari Street, Al Basateen District, Jeddah, KSA		

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Hollow Block	1	400	200	200	27.8	32.0	2.2
	2	400	200	200	28.9	32.0	2.3
	3	400	200	200	29.1	32.5	2.3
						Average	2.24

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Concrete Blocks Test Report

Client	Riyadh Block Factory	Report No.	JH.MMR23006589
Contractor	Riyadh Block Factory	Date Reported	7-Dec-2023
Consultant	n.p	Sample No.	JH.MMS23002621
Project No.	n.p	Request No.	JH.MMO23001980
Project Name	Private	Client Reference	N.P.
Client's Rep	n.p	Consultant's Rep	N.P.

Sample Description	Hollow Block 200mm,250mm,400mm	Sampled By	CLIENT'S REP.
Source	ABV Rock	Sample Brt. In By	CLIENT'S REP.
Test Method	ASTM C140-22	Sampling Date	22-Nov-2023
Test Method Var.	n.p	Date Received	22-Nov-2023
Tested By	Aces	Date Tested	23-Nov-2023
Lab. Address	Building No. 115, Al Imam Al Bukhari Street, Al Basateen District, Jeddah, KSA		

Dimensions:

Type	Size	Block No.	Dimensions Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Hollow Block	400x250x200	1	400.0	250.0	200.0	37.3	34.0
	400x250x200	2	400.0	250.0	200.0	37.9	33.0
	400x250x200	3	400.0	250.0	200.0	40.2	34.0

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions Length (mm)	Width (mm)	Height (mm)	Net Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)	Average Compressive Strength (Mpa)
Hollow Block	400x250x200	1	400	250	200	77840	1909.8	598.3	29888	7.7	7.7
	400x250x200	2	400	250	200	77470	1911.6	612.2	29771	7.9	
	400x250x200	3	400	250	200	77675	1911.0	603.8	29845	7.8	

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Concrete Block Test Report For Water Absorption

Client	Riyadh Block Factory	**Report No.**	JH.MMR23006589
Contractor	Riyadh Block Factory	**Date Reported**	07/12/2023
Consultant	n.p	**Sample No.**	JH.MMS23002621
Project No.	n.p	**Request No.**	JH.MMO23001980
Project Name	Private	**Client Reference**	N.P.

Sample Description	Hollow Block 200mm,250mm,400mm	**Sampled By**	CLIENT'S REP.
Source	ABV Rock	**Sample Brt. In By**	CLIENT'S REP.
Test Method	ASTM C140-22	**Date Received**	22/11/2023
Tested By	n.p	**Date Tested**	22/11/2023
Lab. Address	Building No. 115, Al Imam Al Bukhari Street, Al Basateen District, Jeddah, KSA		

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Hollow Block	1	400.0	250.0	200.0	29888	30698	2.7
	4	400.0	250.0	200.0	29771	30578	2.7
	5	400.0	250.0	200.0	29845	30654	2.7

Notes:

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Concrete Block Test Report For Fire Resistance

Client	Riyadh Block Factory	**Report No.**	JH.MMR23006589
Contractor	Riyadh Block Factory	**Date Reported**	07/12/2023
Consultant	n.p	**Sample No.**	JH.MMS23002621
Project No.	n.p	**Request No.**	JH.MMO23001980
Project Name	Private	**Client Reference**	N.P.

Sample Description	Hollow Block 200mm,250mm,400mm	**Sampled By**	CLIENT'S REP.
Source	ABV Rock	**Sampling Date**	22-Nov-2023
Test Method	ACI 216 (Calculation Method)	**Sample Brt. In By**	CLIENT'S REP.
Test Method Var.	n.p	**Date Received**	22-Nov-2023
Tested By	Aces	**Date Tested**	23-Nov-2023
Lab. Address	Building No. 115, Al Imam Al Bukhari Street, Al Basateen District, Jeddah, KSA		

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Hollow Block	1	400	250	200	37.3	34.0	2.8
	4	400	250	200	37.9	33.0	2.8
	5	400	250	200	40.2	34.0	2.9
						Average	2.85

Notes:

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تقرير اختبار

Applus SAFCO Together beyond standards

Compressive Strength of Burkani Blocks

TEST REF: ASTM C 140

PROJECT	Laboratory Test	**DATE**	12-Nov-2023
CLIENT	Riyadh Block Factory	**REF**	SMF-4918
LOCATION	Asfan area, Kingdom of Saudi Arabia	**J.O. No.**	JD-QC-0306

Concrete Masonry Units Dimension			
Length	40.0 cm	Net Area	581.50 cm^2
Width	25.0 cm	Net Volume	11630.0 cm^3
Height	20.0 cm	Gross Volume	20000.0 cm^3

Date Cast		Dimension of Insulation	32.0 x 5.50 cm
Date Received	12 November 2023	Dimension of other hole	15.0 x 3.5 cm
Date Tested	12 November 2023	Number of hole	4 cell

Sample No.	Sample Description	Age *(days)*	Weight *(gm)*	Density *gm/cm³*	Load *(kN)*	Strength *(MPa)*
1	Masonry Units(40 x 25 x 20 cm) with White Insulation (55 mm)	-	28,565	2.456	584.7	10.06
2	" " "	-	28,415	2.443	636.5	10.95
Average			28490	2.450	610.6	**10.50**

ASTM C 129 Requirements for Non-Load Bearing Concrete Masonry Units

	Compressive Strength based on Net Area (MPa)
Average of 3 units	4.14
Individual unit	3.45

Remarks: Sample tested comforms with the requirements of ASTM C 129

Supplier:

TEST PERFORMED BY :		**CHECKED BY :**	
NAME	Usman	NAME	M. B. Coronado
SIGNATURE		SIGNATURE	
DATE	12 November 2023	DATE	12 November 2023

ENERGY & INDUSTRY DIVISION

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مقاومة الحريق · بلك معزول 25 سم · 4 ساعات

مختبرات NCMA TEK · SAFCO · نوفمبر 2023

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Applus SAFCO Together beyond standards

Fire Resistance of Insulated Concrete Masonry Unit

TEST REF: NCMA TEK

PROJECT	Laboratory Test	**DATE**	12-Nov-2023
CLIENT	Riyadh Block Factory	**REF**	SMF-4918
LOCATION	Asfan area, Kingdom of Saudi Arabia	**J.O. No.**	JD-QC-0306

Masonry Unit Actual Dimension				
Length	40.0 cm	Net Area	581.50	cm^2
Height	20.0 cm	Net Volume	11630.0	cm^3
Width	25.0 cm	Gross Volume	20000.0	cm^3
% Soild	58.2 %	Equiv.Thickness= %solid x eq. Thi	145.4	mm

Date Cast		Dimension of Insulation	32.0 x 5.50	cm
Date Received	12 November 2023	Dimension of other hole	15.0 x 3.5	cm
Date Tested	12 November 2023	Number of hole	4	cell

The fire resistance rating of the concrete masonry unit is determined by "Calculation Method" in compliance to the standard given in the Engineering Bulletin from National Masonry Association (NCMA). The calculation method determined fire resistance rating based on the equivalent thickness of concrete masonry unit and aggregates types used in their manufacture. The standard established a relationship between fire resistance rating and the equivalent thickness of concrete masonry units.

Aggregate type used in the Concrete Masonry Units : Slag

Sample No.	Full size Units (Test Specimen Nominal Size)	Equivalent Thickness mm	Fire Resistance Rating hours
1	Length = 40 cm	145.4	4.0
	Width = 25 cm		
	Height = 20 cm		
Average			

Remarks: **Non-Load Bearing Concrete Masonry Units**

Sample were delivered by client to our laboratory. Information provided by the client

Supplier: -

TEST PERFORMED BY :		CHECKED BY :	
NAME	Naveed	NAME	M. B. Coronado
SIGNATURE		SIGNATURE	
DATE	12 November 2023	DATE	12 November 2023

ENERGY & INDUSTRY DIVISION

مقاومة الحريق · بلك 20 سم · 3 ساعات

مختبرات NCMA TEK · SAFCO · نوفمبر 2023

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Fire Resistance of Concrete Masonry Unit

TEST REF: NCMA TEK

PROJECT	Laboratory Test	DATE	12-Nov-2023
CLIENT	Riyadh Block Factory	REF	SMF-4918
LOCATION	Asfan area, Kingdom of Saudi Arabia	J.O. No.	JD-QC-0306

Masonry Unit Actual Dimension				
Length	40.0 cm	Net Area	408.00	cm^2
Height	20.0 cm	Net Volume	8160.0	cm^3
Width	20.0 cm	Gross Volume	16000.0	cm^3
% Soild	51.0 %	Equiv.Thickness= %solid x eq. Thi	102.0	mm

Date Cast		Web Thickness	3.0	cm
Date Received	12 November 2023	Face Shell Thckness	3.0	cm
Date Tested	12 November 2023	Number of cell	3	cell

The fire resistance rating of the concrete masonry unit is determined by "Calculation Method" in compliance to the standard given in the Engineering Bulletin from National Masonry Association (NCMA). The calculation method determined fire resistance rating based on the equivalent thickness of concrete masonry unit and aggregates types used in their manufacture. The standard established a relationship between fire resistance rating and the equivalent thickness of concrete masonry units.

Aggregate type used in the Concrete Masonry Units : Slag

Sample No.	Full size Units (Test Specimen Nominal Size)	Equivalent Thickness mm	Fire Resistance Rating hours
1	Length = 40 cm	102.0	3.0
	Width = 20 cm		
	Height = 20 cm		
Average			

Remarks: Non-Load Bearing Concrete Masonry Units

Sample were delivered by client to our laboratory. Information provided by the client

Supplier: -

TEST PERFORMED BY :		CHECKED BY :	
NAME	Naveed	NAME	M. B. Coronado
SIGNATURE		SIGNATURE	
DATE	12 November 2023	DATE	12 November 2023

ENERGY & INDUSTRY DIVISION

مقاومة الحريق · بلك 10 سم

مختبرات NCMA TEK · SAFCO · نوفمبر 2023

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Applus SAFCO Together beyond standards

Fire Resistance of Concrete Masonry Unit

TEST REF: NCMA TEK

PROJECT	Laboratory Test	**DATE**	12-Nov-2023
CLIENT	Riyadh Block Factory	**REF**	SMF-4918
LOCATION	Asfan area, Kingdom of Saudi Arabia	**J.O. No.**	JD-QC-0306

Masonry Unit Actual Dimension				
Length	40.0 cm	Net Area	241.92	cm^2
Height	20.0 cm	Net Volume	4838.4	cm^3
Width	10.0 cm	Gross Volume	8000.0	cm^3
% Soild	60.5 %	Equiv.Thickness= %solid x eq. Thi	60.5	mm

Date Cast		Web Thickness	2.4	cm
Date Received	12 November 2023	Face Shell Thckness	2.4	cm
Date Tested	12 November 2023	Number of cell	3	cell

The fire resistance rating of the concrete masonry unit is determined by "Calculation Method" in compliance to the standard given in the Engineering Bulletin from National Masonry Association (NCMA). The calculation method determined fire resistance rating based on the equivalent thickness of concrete masonry unit and aggregates types used in their manufacture. The standard established a relationship between fire resistance rating and the equivalent thickness of concrete masonry units.

Aggregate type used in the Concrete Masonry Units : Slag

Sample No.	Full size Units (Test Specimen Nominal Size)	Equivalent Thickness mm	Fire Resistance Rating hours
1	Length = 40 cm	60.5	1.2
	Width = 10 cm		
	Height = 20 cm		
Average			

Remarks: **Non-Load Bearing Concrete Masonry Units**

Sample were delivered by client to our laboratory. Information provided by the client

Supplier: -

TEST PERFORMED BY :		CHECKED BY :	
NAME	Naveed	NAME	M. B. Coronado
SIGNATURE		SIGNATURE	
DATE	12 November 2023	DATE	12 November 2023

ENERGY & INDUSTRY DIVISION

مقاومة الضغط · بلك مفرّغ 25 سم

مختبرات ASTM C140 / C129 · RGF · مايو 2022

تقرير اختبار

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Location: Garnatha St. near Arbaeen St. intersection, Mushrefah District, Jeddah

TEST REPORT
CONCRETE BLOCK TEST RESULTS
ASTM C140-14a

CLIENT	: Riyadh Block Factory	LAB. REF. NO. :	22/000196/PJ
PROJECT	:	SAMPLING DATE :	-
SUPPLIER NAME:	Riyadh Block Factory	TESTING DATE :	30.05.2022
SAMPLE NO. :	1	REPORT DATE :	30.05.2022

Required Limit
ASTM C129-05
Normal Weight Class (200mm)
Non Load Bearing

			1	2	3	
REFERENCE No.						
FACE SHELL THICKNESS		m	31	31	31	
WEB THICKNESS		m	31	31	31	
DIMENSIONS (mm)	LENGTH	(L)	400	400	400	
	WIDTH	(W)	250	250	250	
	HEIGHT	(H)	200	200	200	
AREA GROSS (cm^2)	GROSS		1000.0	1000.0	1000.0	
AREA NET (cm^2)	NET		617.8	617.8	617.8	
LOAD (kN)			820.8	794.3	849.3	
GROSS CRUSHING STRENGTH		(MPa)	8.37	8.10	8.66	
NET CRUSHING STRENGTH		(MPa)	13.55	13.11	14.02	
AVERAGE STRENGTH (GROSS) =			8.38 MPa			
AVERAGE STRENGTH (NET) =			13.56 MPa			3.45 Min.

REMARKS : 1- Non load bearing concrete masonary units with 04 No's of hollow one end is open (Plus center hole is completely hollow)
2- The specimens were supplied by the Client

TESTED BY : Faiyaz Ahmed
CHECKED BY/REVIEWED BY : Syed Asad Abbas
APPROVED BY :
(LAB. INCHARGE)

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RIYADH GEOTECHNIQUE & FOUNDATIONS

مقاومة الضغط · بلك مفرّغ 20 سم · مشروع SFMC–وزارة الداخلية

مختبرات ASTM C140 / C129 · RGF · مايو 2022

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Location: Garnatha St. near Arbaeen St. intersection, Mushrefah District, Jeddah

TEST REPORT
CONCRETE BLOCK TEST RESULTS
ASTM C140-14a

CLIENT : Riyadh Block Factory
PROJECT : SFMC-MOI Project Jeddah
SUPPLIER NAME: Riyadh Block Factory
SAMPLE NO. : 1

LAB. REF. NO. : 22/000196/PJ
SAMPLING DATE : -
TESTING DATE : 30.05.2022
REPORT DATE : 30.05.2022

Required Limit
ASTM C129-05
Normal Weight Class (200mm)
Non Load Bearing

			1	2	3	
REFERENCE No.						
FACE SHELL THICKNESS		m	30	30	30	
WEB THICKNESS		m	30	30	30	
DIMENSIONS (mm)	LENGTH	(L.)	400	400	400	
	WIDTH	(W)	197	197	199	
	HEIGHT	(H)	200	200	200	
AREA GROSS (cm^2)	GROSS		788.0	788.0	796.0	
AREA NET (cm^2)	NET		411.2	411.2	419.2	
LOAD (kN)			441.5	429.7	508.0	
GROSS CRUSHING STRENGTH		(MPa)	5.71	5.56	6.51	
NET CRUSHING STRENGTH		(MPa)	10.95	10.66	12.36	
AVERAGE STRENGTH (GROSS) = 5.93 MPa						
AVERAGE STRENGTH (NET) = 11.32 MPa						3.45 Min.

REMARKS : 1- Non load bearing concrete masonary units with 03 No's of hollow one end is open.
2- The specimens were supplied by the Client

TESTED BY : Faiyaz Ahmed
CHECKED BY/REVIEWED BY : Syed Asad Abbas
APPROVED BY :
(LAB. INCHARGE)

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مقاومة الضغط · بلك مفرّغ 15 و20 و10 سم · صفحة 1 من 3

مختبرات RGF · ASTM C140 / C129 · نوفمبر 2021

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Location: Garnatha St. near Arbaeen St. intersection, Mushrefah District, Jeddah

TEST REPORT
CONCRETE BLOCK TEST RESULTS
ASTM C140-12

CLIENT	: Riyadh Block Factory	LAB. REF. NO. :	21/00732/PJ
PROJECT	:	SAMPLING DATE :	02.11.2021
SUPPLIER NAME:	Riyadh Block Factory	TESTING DATE :	03.11.2021
SAMPLE NO. :	1	REPORT DATE :	03.11.2021

			1	2	3	Required Limit ASTM C129-05 Normal Weight Class (200mm) Non Load Bearing
REFERENCE No.			1	2	3	
FACE SHELL THICKNESS		m	27	26	26	
WEB THICKNESS		m	26	26	26	
DIMENSIONS (mm)	LENGTH	(L)	398	399	400	
	WIDTH	(W)	148	148	150	
	HEIGHT	(H)	200	200	200	
AREA GROSS (cm^2)	GROSS		589.0	590.5	600.0	
AREA NET (cm^2)	NET		306.8	305.4	306.6	
LOAD (kN)			345.0	354.7	363.3	
GROSS CRUSHING STRENGTH		(MPa)	5.97	6.13	6.18	
NET CRUSHING STRENGTH		(MPa)	11.47	11.85	12.08	
AVERAGE STRENGTH (GROSS) =			6.09 MPa			
AVERAGE STRENGTH (NET) =			11.80 MPa			4.14 Min.

REMARKS : 1- Non load bearing concrete masonary units with 03 No's of hollow one end is open.
2- The specimens were supplied by the Client

TESTED BY : Tariq CHECKED BY/REVIEWED BY : Syed Asad Abbas

APPROVED BY : Ahmed
(LAB. INCHARGE)

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مقاومة الضغط · بلك مفرّغ 15 و20 و10 سم · صفحة 2 من 3

مختبرات ASTM C140 / C129 · RGF · نوفمبر 2021

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Location: Garnatha St. near Arbaeen St. intersection, Mushrefah District, Jeddah

TEST REPORT
CONCRETE BLOCK TEST RESULTS
ASTM C140-12

CLIENT	: Riyadh Block Factory	LAB. REF. NO. :	21/00732/PJ
PROJECT	:	SAMPLING DATE :	02.11.2021
SUPPLIER NAME:	Riyadh Block Factory	TESTING DATE :	03.11.2021
SAMPLE NO. :	1	REPORT DATE :	03.11.2021

			1	2	3	Required Limit ASTM C129-05 Normal Weight Class (200mm) Non Load Bearing
REFERENCE No.						
FACE SHELL THICKNESS		m	31	31	30	
WEB THICKNESS		m	32	31	31	
DIMENSIONS (mm)	LENGTH	(L)	400	399	398	
	WIDTH	(W)	200	200	199	
	HEIGHT	(H)	200	200	200	
AREA GROSS (cm^2)	GROSS		800.0	798.0	792.0	
AREA NET (cm^2)	NET		433.6	424.9	419.4	
LOAD (kN)			406.6	401.4	413.9	
GROSS CRUSHING STRENGTH		(MPa)	5.18	5.13	5.33	
NET CRUSHING STRENGTH		(MPa)	9.57	9.63	10.07	
AVERAGE STRENGTH (GROSS) =			5.22 MPa			
AVERAGE STRENGTH (NET) =			9.76 MPa			4.14 Min.

REMARKS : 1- Non load bearing concrete masonary units with 03 No's of hollow one end is open.
2- The specimens were supplied by the Client

TESTED BY : Tariq CHECKED BY/REVIEWED BY : Syed Asad Abbas

APPROVED BY : Ahmed
(LAB. INCHARGE)

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مقاومة الضغط · بلك مفرّغ 15 و20 و10 سم · صفحة 3 من 3

مختبرات ASTM C140 / C129 · RGF · نوفمبر 2021

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Location: Garnatha St. near Arbaeen St. intersection, Mushrefah District, Jeddah

TEST REPORT
CONCRETE BLOCK TEST RESULTS
ASTM C140-12

CLIENT : Riyadh Block Factory
PROJECT :
SUPPLIER NAME: Riyadh Block Factory
SAMPLE NO. : 1

LAB. REF. NO. : 21/00732/PJ
SAMPLING DATE : 02.11.2021
TESTING DATE : 03.11.2021
REPORT DATE : 03.11.2021

			1	2	3	Required Limit ASTM C129-05 Normal Weight Class (200mm) Non Load Bearing
REFERENCE No.			1	2	3	
FACE SHELL THICKNESS		m	31	31	32	
WEB THICKNESS		m	30	31	29	
DIMENSIONS (mm)	LENGTH	(L)	400	398	399	
	WIDTH	(W)	100	99	99	
	HEIGHT	(H)	200	200	200	
AREA GROSS (cm^2)	GROSS		400.0	394.0	395.0	
AREA NET (cm^2)	NET		293.0	288.8	290.6	
LOAD (kN)			383.7	398.4	371.6	
GROSS CRUSHING STRENGTH	(MPa)		9.78	10.31	9.60	
NET CRUSHING STRENGTH	(MPa)		13.36	14.07	13.04	
AVERAGE STRENGTH (GROSS) =	9.90 MPa					
AVERAGE STRENGTH (NET) =	13.49 MPa					4.14 Min.

REMARKS : 1- Non load bearing concrete masonary units with 03 No's of hollow one end is open.
2- The specimens were supplied by the Client

TESTED BY : Tariq
CHECKED BY/REVIEWED BY : Syed Asad Abbas
APPROVED BY : Ahmed
(LAB. INCHARGE)

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اختبار مقاومة الحريق · بلك مصمت 400×200×200 مم

مختبرات ACES · ACI 216 · ديسمبر 2022

تقرير اختبار

Partners for Quality Construction

Arab Company For Laboratories and Soil
الشركة العربية للمختبرات والتربة

Concrete Block Test Report For Fire Resistance

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	n.p	Sample No.	-
Project No.	n.p	temporary reference number	NO.94-10
Project Name	Abdullatif Jameel Hotel	Client Reference	Verbal

Sample Description	400x200x200 mm - Solid Block	Sampled By	Client's Rep.
supplier	N.P	Sampling Date	5-Dec-2022
Test Method	ACI 216 (Calculation Method)	Sample Brt. In By	Client's Rep.
Test Method Var.	N.P	Date Received	5-Dec-2022
Tested By	ACES' Rep	Date Tested	7-Dec-2022

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Solid Block	1	400	200	200	-	-	2.6
	2	400	200	200	-	-	2.8
	3	400	200	200	-	-	2.5

*The test results represent the submitted sample only.
*Test results shall not be interpreted, reproduced or quoted in a whole or in part without prior written approval of ACES

Arab Company For Laboratories and Soil
Eng. M.D. Llantada
Materials Engineer

Arab Company For Laboratories and Soil
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اختبار امتصاص الماء · بلك مصمت 400×200×200 مم

مختبرات ACES · ASTM C140 · ديسمبر 2022

تقرير اختبار

Partners for Quality Construction

Arab Company For Laboratories and Soil الشركة العربية للمختبرات والتربة

Concrete Block Test Report For Water Absorption

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	n.p	Sample No.	10
Project No.	N.P.	temporary reference number	No.94
Project Name	Private	Client Reference	Verbal

Sample Description	400x200x200 mm - Solid Block	Sampled By	Client's Rep.
supplier	N.P	Sample Brt. In By	Client's Rep.
Test Method	ASTM C140/C140M-20a	Date Received	5-Dec-2022
Tested By	ACES	Date Tested	7-Dec-2022

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Solid Block	1	400.0	200.0	200.0	34606	35542	2.7
	2	400.0	200.0	200.0	33514	34422	2.7
	3	400.0	200.0	200.0	34560	35332	2.2

Notes:-
*The test results represent the submitted sample only.
*Test results shall not be interpreted, reproduced or quoted in a whole or in part without prior written approval of ACES

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Eng. M.D. Llantada
Materials Engineer

Arab Company For Laboratories and Soil
Eng. Mahmoud Jaber
Head of Materials Section

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اختبار مقاومة الضغط والأبعاد · بلك مصمت 400×200×200 مم

مختبرات ASTM C140 · ACES · ديسمبر 2022

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الشركة العربية للمختبرات والتربة

Test Report
Concrete Masonry Units

Test Method: ASTM C140/C140M - 21

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27/12/2022
Consultant	n.p	Sample No.	-
Project No.	N.P	temporary reference number	NO.94-10
Project Name	Private	Client Reference	N.P.
Sample Description	400x200x200 mm - Solid Block	Sampled By	Client's Rep.
supplier	N.P	Sample Brt. In By	Client's Rep.
Test Method	ASTM C140	Sampling Date	05/12/2022
Test Method Var.	N.P	Date Received	05/12/2022
Tested By	ACES's Rep.	Date Tested	06/12/2022
Lab. Address	Bldg #115, Al Imam Al Bukhari St., Al Basateen, Jeddah, KSA	Testing Location	ACES Lab - Jeddah

Dimensions:

Type	Size	Block No.	Dimensions Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Solid Block	400x200x200	1	400.0	200.0	200.0	-	-
	400x200x200	2	400.0	200.0	200.0	-	-
	400x200x200	3	400.0	200.0	200.0	-	-

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions Length (mm)	Width (mm)	Height (mm)	Net Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)
Solid Block	400x200x200	1	400	200	200	48120	3585.6	1544.9	34606	32.1
	400x200x200	2	400	200	200	50650	3286.2	1325.6	33514	26.2
	400x200x200	3	400	200	200	47635	3615.4	1470.2	34560	30.9
Average										29.7

Notes

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اختبار مقاومة الحريق · بلك مصمت 400×150×200 مم

مختبرات ACES · ACI 216 · ديسمبر 2022

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Arab Company For Laboratories and Soil

Concrete Block Test Report For Fire Resistance

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	n.p	Sample No.	-
Project No.	n.p	Request No.	NO.94-9
Project Name	Abdullatif Jameel Hotel	Client Reference	Verbal

Sample Description	400x150x200 mm - Solid Block	Sampled By	Client's Rep.
supplier	N.P	Sampling Date	5-Dec-2022
Test Method	ACI 216 (Calculation Method)	Sample Brt. In By	Client's Rep.
Test Method Var.	N.P	Date Received	5-Dec-2022
Tested By	ACES' Rep	Date Tested	7-Dec-2022

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Solid Block	1	400	150	200	-	-	3.3
	2	400	150	200	-	-	3.3
	3	400	150	200	-	-	3.5

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مختبرات ACES · ASTM C140 · ديسمبر 2022

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Concrete Block Test Report For Water Absorption

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	n.p	Sample No.	9
Project No.	N.P.	temporary reference number	No.94
Project Name	Private	Client Reference	Verbal

Sample Description	400x150x200 mm - Solid Block	Sampled By	Client's Rep.
supplier	N.P	Sample Brt. In By	Client's Rep.
Test Method	ASTM C140/C140M-20a	Date Received	5-Dec-2022
Tested By	ACES	Date Tested	7-Dec-2022

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Solid Block	1	400.0	150.0	200.0	25738	26621	3.4
	2	400.0	150.0	200.0	26159	26889	2.8
	3	400.0	150.0	200.0	26614	27508	3.4

Notes:-
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Yazan Baraka
Materials Engineer

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الشركة العربية للمختبرات والتربة

Test Report
Concrete Masonry Units

Test Method: ASTM C140/C140M - 21

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27/12/2022
Consultant	n.p	Sample No.	-
Project No.	N.P	temporary reference number	NO.94-9
Project Name	Private	Client Reference	N.P.
Sample Description	400x150x200 mm - Solid Block	Sampled By	Client's Rep.
supplier	N.P	Sample Brt. In By	Client's Rep.
Test Method	ASTM C140	Sampling Date	05/12/2022
Test Method Var.	N.P	Date Received	05/12/2022
Tested By	ACES's Rep.	Date Tested	06/12/2022
Lab. Address	Bldg #115, Al Imam Al Bukhari St., Al Basateen, Jeddah, KSA	Testing Location	ACES Lab - Jeddah

Dimensions:

Type	Size	Block No.	Dimensions Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Solid Block	400x150x200	1	400.0	150.0	200.0	-	-
	400x150x200	2	400.0	150.0	200.0	-	-
	400x150x200	3	400.0	150.0	200.0	-	-

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions Length (mm)	Width (mm)	Height (mm)	Net Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)
Solid Block	400x150x200	1	400	150	200	56460	2246.9	921.0	25738	16.3
	400x150x200	2	400	150	200	56775	2268.3	845.7	26159	14.9
	400x150x200	3	400	150	200	58395	2259.4	901.6	26614	15.4
Average										15.5

Notes

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Concrete Block Test Report For Fire Resistance

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	Abdullatif Jameel Hotel	Sample No.	-
Project No.	n.p	Request No.	NO.94-8
Project Name	Abdullatif Jameel Hotel	Client Reference	Verbal

Sample Description	400x100x200 mm - Solid Block	Sampled By	Client's Rep.
supplier	N.P	Sampling Date	5-Dec-2022
Test Method	ACI 216 (Calculation Method)	Sample Brt. In By	Client's Rep.
Test Method Var.	N.P	Date Received	5-Dec-2022
Tested By	ACES' Rep	Date Tested	7-Dec-2022

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Solid Block	1	400	100	200	-	-	2
	2	400	100	200	-	-	2
	3	400	100	200	-	-	2

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Concrete Block Test Report For Water Absorption

Client	Abdullatif Jameel Hotel	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	Abdullatif Jameel Hotel	Sample No.	8
Project No.	N.P.	temporary reference number	No.94
Project Name	Private	Client Reference	Verbal

Sample Description	400x100x200 mm - Solid Block	Sampled By	Client's Rep.
supplier	N.P	Sample Brt. In By	Client's Rep.
Test Method	ASTM C140/C140M-20a	Date Received	5-Dec-2022
Tested By	ACES	Date Tested	7-Dec-2022

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Solid Block	1	400.0	100.0	200.0	17114	17972	5.0
	2	400.0	100.0	200.0	16360	17183	5.0
	3	400.0	100.0	200.0	16898	17708	4.8

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Arab Company For Laboratories and Soil

Test Report
Concrete Masonry Units

Test Method: ASTM C140/C140M - 21

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27/12/2022
Consultant	Abdullatif Jameel Hotel	Sample No.	-
Project No.	N.P	temporary reference number	NO.94-8
Project Name	Private	Client Reference	N.P.

Sample Description	400x100x200 mm - Solid Block	Sampled By	Client's Rep.
supplier	N.P	Sample Brt. In By	Client's Rep.
Test Method	ASTM C140	Sampling Date	05/12/2022
Test Method Var.	N.P	Date Received	05/12/2022
Tested By	ACES's Rep.	Date Tested	06/12/2022
Lab. Address	Bldg #115, Al Imam Al Bukhari St., Al Basateen, Jeddah, KSA	Testing Location	ACES Lab - Jeddah

Dimensions:

Type	Size	Block No.	Dimensions Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Solid Block	400x100x200	1	400.0	100.0	200.0	-	-
	400x100x200	2	400.0	100.0	200.0	-	-
	400x100x200	3	400.0	100.0	200.0	-	-

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions Length (mm)	Width (mm)	Height (mm)	Net Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)
Solid Block	400x100x200	1	400	100	200	38900	2150.1	583.9	17114	15.0
	400x100x200	2	400	100	200	36760	2173.0	486.5	16360	13.2
	400x100x200	3	400	100	200	38085	2218.5	601.1	16898	15.8
Average										14.7

Notes

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مختبرات ACES · ACI 216 · ديسمبر 2022

تقرير اختبار

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الشركة العربية للمختبرات والتربة

Concrete Block Test Report For Fire Resistance

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	N.P	Sample No.	7
Project No.	N.P	Request No.	NO.94
Project Name	Private	Client Reference	Verbal

Sample Description	400x300x200 mm - Hollow Block Isolated SIDE	Sample ID	7/1
Sample Description	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sampling Date	5-Dec-2022
Test Method	ACI 216 (Calculation Method)	Sample Brt. In By	ACES's Rep.
Test Method Var.	N.P	Date Received	5-Dec-2022
Tested By	ACES' Rep	Date Tested	6-Dec-2022

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Hollow Block	1	400	300	200	36.2	32.6	4.21
	2	400	300	200	36.4	29.7	4.39
	3	400	300	200	34.6	29.0	4.20
						Average	4.27

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Eng. Yazan Baraka
Materials Engineer

Arab Company For Laboratories and Soil
Eng. Mahmoud Jaber
Head of Materials Section

Arab Company For Laboratories and Soil
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مختبرات ACES · ASTM C140 · ديسمبر 2022

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الشركة العربية للمختبرات والتربة

Concrete Block Test Report For Water Absorption

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	N.P	Sample No.	7
Project No.	N.P.	Request No.	NO.94
Project Name	Private	Client Reference	Verbal

Sample Description	400x300x200 mm - Hollow Block Isolated SIDE	Sample ID	7/1
Supplier	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sample Brt. In By	ACES's Rep.
Test Method	ASTM C140/C140M-20a	Date Received	5-Dec-2022
Tested By	ACES	Date Tested	7-Dec-2022

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Hollow Block	1	400.0	300.0	200.0	32031	32887	2.7
	2	400.0	300.0	200.0	32703	33562	2.6
	3	400.0	300.0	200.0	32069	32918	2.6

Notes:-
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اختبار مقاومة الضغط والأبعاد · بلك مفرّغ معزول 400×300×200 مم

مختبرات ACES · ASTM C140 · ديسمبر 2022

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الشركة العربية للمختبرات والتربة

Concrete Blocks Test Report

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27/12/2022
Consultant	N.P	Sample No.	7
Project No.	N.P	temporary reference number	NO.94
Project Name	Private	Client Reference	N.P.
Sample Description	400x300x200 mm - Hollow Block Isolated SIDE	Sample ID	7/1
Supplier	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sample Brt. In By	ACES's Rep.
Test Method	ASTM C140	Sampling Date	05/12/2022
Test Method Var.	N.P	Date Received	05/12/2022
Tested By	ACES's Rep.	Date Tested	06/12/2022

Dimensions:

Type	Size	Block No.	Dimensions				
			Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Hollow Block	400x300x200	1	400.0	300.0	200.0	36.2	32.6
	400x300x200	2	400.0	300.0	200.0	36.4	29.7
	400x300x200	3	400.0	300.0	200.0	34.6	29.0

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions			Net Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)
			Length (mm)	Width (mm)	Height (mm)					
Hollow Block	400x300x200	1	400	300	200	66825	2384.7	689.0	32031	10.3
	400x300x200	2	400	300	200	68870	2292.8	652.0	32703	9.5
	400x300x200	3	400	300	200	66645	2389.8	725.0	32069	10.9
Average										10.2

Notes

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الشركة العربية للمختبرات والتربة

Concrete Block Test Report For Fire Resistance

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	N.P	Sample No.	6
Project No.	N.P	Request No.	NO.94
Project Name	Private	Client Reference	Verbal

Sample Description	400x250x200 mm - Hollow Block One SIDE	Sample ID	6/1
Sample Description	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sampling Date	5-Dec-2022
Test Method	ACI 216 (Calculation Method)	Sample Brt. In By	ACES's Rep.
Test Method Var.	N.P	Date Received	5-Dec-2022
Tested By	ACES' Rep	Date Tested	6-Dec-2022

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Hollow Block	1	400	250	200	27.8	29.5	2.79
	2	400	250	200	26.8	29.7	2.75
	3	400	250	200	26.8	29.0	2.82
						Average	2.78

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Concrete Block Test Report For Water Absorption

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	N.P	Sample No.	6
Project No.	N.P.	Request No.	NO.94
Project Name	Private	Client Reference	Verbal

Sample Description	400x250x200 mm - Hollow Block One SIDE	Sample ID	6/1
Supplier	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sample Brt. In By	ACES's Rep.
Test Method	ASTM C140/C140M-20a	Date Received	5-Dec-2022
Tested By	ACES	Date Tested	7-Dec-2022

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Hollow Block	1	400.0	250.0	200.0	22838	23712	3.8
	2	400.0	250.0	200.0	22782	23556	3.4
	3	400.0	250.0	200.0	22607	23482	3.9

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الشركة العربية للمختبرات والتربة

Concrete Blocks Test Report

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	21/12/2022
Consultant	N.P	Sample No.	6
Project No.	N.P	temporary reference number	NO.94
Project Name	Private	Client Reference	N.P.

Sample Description	400x250x200 mm - Hollow Block One SIDE	Sample ID	6/1
Supplier	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sample Brt. In By	ACES's Rep.
Test Method	ASTM C140	Sampling Date	05/12/2022
Test Method Var.	N.P	Date Received	05/12/2022
Tested By	ACES's Rep.	Date Tested	06/12/2022

Dimensions:

Type	Size	Block No.	Dimensions				
			Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Hollow Block	400x250x200	1	400.0	250.0	200.0	27.8	29.45
	400x250x200	2	400.0	250.0	200.0	26.8	29.65
	400x250x200	3	400.0	250.0	200.0	26.8	28.95

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions			Net Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)
			Length (mm)	Width (mm)	Height (mm)					
Hollow Block	400x250x200	1	400	250	200	50460	2245.7	501.9	22838	10
	400x250x200	2	400	250	200	50070	2257.6	467.3	22782	9.3
	400x250x200	3	400	250	200	50815	2212.1	526.2	22607	10.4
Average										9.9

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Concrete Block Test Report For Fire Resistance

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	N.P	Sample No.	5
Project No.	N.P	Request No.	NO.94
Project Name	Private	Client Reference	Verbal

Sample Description	400x250x200 mm - Hollow Block Isolated SIDE	Sample ID	5/1
Sample Description	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sampling Date	5-Dec-2022
Test Method	ACI 216 (Calculation Method)	Sample Brt. In By	ACES's Rep.
Test Method Var.	N.P	Date Received	5-Dec-2022
Tested By	ACES' Rep	Date Tested	6-Dec-2022

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Hollow Block	1	400	250	200	33.8	30.5	3.31
	2	400	250	200	33.6	30.4	3.34
	3	400	250	200	34.1	30.5	3.33
						Average	3.32

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مختبرات ASTM C140 · ACES · ديسمبر 2022

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Arab Company For Laboratories and Soil
الشركة العربية للمختبرات والتربة

Concrete Block Test Report For Water Absorption

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	N.P	Sample No.	5
Project No.	N.P.	Request No.	NO.94
Project Name	Private	Client Reference	Verbal

Sample Description	400x250x200 mm - Hollow Block Isolated SIDE	Sample ID	5/1
Supplier	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sample Brt. In By	ACES's Rep.
Test Method	ASTM C140/C140M-20a	Date Received	5-Dec-2022
Tested By	ACES	Date Tested	7-Dec-2022

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Hollow Block	1	400.0	250.0	200.0	28212	29108	3.2
	2	400.0	250.0	200.0	27882	28707	3.0
	3	400.0	250.0	200.0	27912	28814	3.2

Notes:-
*The test results represent the submitted sample only.
*Test results shall not be interpreted, reproduced or quoted in a whole or in part without prior written approval of ACES

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Eng. Yazan Baraka
Materials Engineer

Arab Company For Laboratories and Soil
Eng. Mahmoud Jaber
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اختبار مقاومة الضغط والأبعاد · بلك مفرّغ معزول (جهة واحدة) 400×250×200 مم

مختبرات ACES · ASTM C140 · ديسمبر 2022

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الشركة العربية للمختبرات والتربة

Concrete Blocks Test Report

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27/12/2022
Consultant	N.P	Sample No.	5
Project No.	N.P	temporary reference number	NO.94
Project Name	Private	Client Reference	N.P.
Sample Description	400x250x200 mm - Hollow Block Isolated SIDE	Sample ID	5/1
Supplier	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sample Brt. In By	ACES's Rep.
Test Method	ASTM C140	Sampling Date	05/12/2022
Test Method Var.	N.P	Date Received	05/12/2022
Tested By	ACES's Rep.	Date Tested	06/12/2022

Dimensions:

Type	Size	Block No.	Dimensions				
			Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Hollow Block	400x250x200	1	400.0	250.0	200.0	33.8	30.5
	400x250x200	2	400.0	250.0	200.0	33.6	30.35
	400x250x200	3	400.0	250.0	200.0	34.1	30.45

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions			Net Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)
			Length (mm)	Width (mm)	Height (mm)					
Hollow Block	400x250x200	1	400	250	200	56435	2481.5	525.7	28212	9.3
	400x250x200	2	400	250	200	56765	2433.3	600.2	27882	10.6
	400x250x200	3	400	250	200	56665	2457.9	628.4	27912	11.1
Average										10.3

Notes

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الشركة العربية للمختبرات والتربة

Concrete Block Test Report For Fire Resistance

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	N.P	Sample No.	4
Project No.	N.P	Request No.	NO.94
Project Name	Private	Client Reference	Verbal

Sample Description	400x200x200 mm - Hollow Block One SIDE	Sample ID	4/1
Sample Description	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sampling Date	5-Dec-2022
Test Method	ACI 216 (Calculation Method)	Sample Brt. In By	ACES's Rep.
Test Method Var.	N.P	Date Received	5-Dec-2022
Tested By	ACES' Rep	Date Tested	6-Dec-2022

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Hollow Block	1	400	200	200	32.5	31.3	2.42
	2	400	200	200	30.9	30.8	2.41
	3	400	200	200	31.8	30.7	2.26
						Average	2.36

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مختبرات ACES · ASTM C140 · ديسمبر 2022

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Concrete Block Test Report For Water Absorption

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	N.P	Sample No.	4
Project No.	N.P.	Request No.	NO.94
Project Name	Private	Client Reference	Verbal

Sample Description	400x200x200 mm - Hollow Block One SIDE	Sample ID	4/1
Supplier	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sample Brt. In By	ACES's Rep.
Test Method	ASTM C140/C140M-20a	Date Received	5-Dec-2022
Tested By	ACES	Date Tested	7-Dec-2022

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Hollow Block	1	400.0	200.0	200.0	20527	21453	4.5
	2	400.0	200.0	200.0	20656	21446	3.8
	3	400.0	200.0	200.0	19944	20772	4.2

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Concrete Blocks Test Report

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27/12/2022
Consultant	N.P	Sample No.	4
Project No.	N.P	temporary reference number	NO.94
Project Name	Private	Client Reference	N.P.

Sample Description	400x200x200 mm - Hollow Block One SIDE	Sample ID	4/1
Supplier	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sample Brt. In By	ACES's Rep.
Test Method	ASTM C140	Sampling Date	05/12/2022
Test Method Var.	N.P	Date Received	05/12/2022
Tested By	ACES's Rep.	Date Tested	06/12/2022

Dimensions:

Type	Size	Block No.	Dimensions				
			Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Hollow Block	400x200x200	1	400.0	200.0	200.0	32.5	31.3
	400x200x200	2	400.0	200.0	200.0	30.9	30.8
	400x200x200	3	400.0	200.0	200.0	31.8	30.65

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions			Net Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)
			Length (mm)	Width (mm)	Height (mm)					
Hollow Block	400x200x200	1	400	200	200	46315	2195.0	581.2	20527	12.5
	400x200x200	2	400	200	200	46125	2215.4	492.6	20656	11
	400x200x200	3	400	200	200	44425	2219.7	532.4	19944	12.0
Average										11.7

Notes

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Head of Materials Section

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Concrete Block Test Report For Fire Resistance

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	N.P	Sample No.	3
Project No.	N.P	Request No.	NO.94
Project Name	Private	Client Reference	Verbal

Sample Description	400x150x200 mm - Hollow Block One SIDE	Sample ID	3/1
Sample Description	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sampling Date	5-Dec-2022
Test Method	ACI 216 (Calculation Method)	Sample Brt. In By	ACES's Rep.
Test Method Var.	N.P	Date Received	5-Dec-2022
Tested By	ACES' Rep	Date Tested	6-Dec-2022

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Hollow Block	1	400	150	200	30.7	30.8	2
	2	400	150	200	31.1	31.3	2.05
	3	400	150	200	31.1	30.9	2.10
						Average	2.03

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Concrete Block Test Report For Water Absorption

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	21-Dec-2022
Consultant	N.P	Sample No.	3
Project No.	N.P.	Request No.	NO.94
Project Name	Private	Client Reference	Verbal

Sample Description	400x150x200 mm - Hollow Block One SIDE	Sample ID	3/1
Supplier	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sample Brt. In By	ACES's Rep.
Test Method	ASTM C140/C140M-20a	Date Received	5-Dec-2022
Tested By	ACES	Date Tested	7-Dec-2022

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Hollow Block	1	400.0	150.0	200.0	17404	18331	5.3
	2	400.0	150.0	200.0	18001	18882	4.9
	3	400.0	150.0	200.0	17930	18872	5.3

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الشركة العربية للمختبرات والتربة

Concrete Blocks Test Report

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	21/12/2022
Consultant	N.P	Sample No.	3
Project No.	N.P	temporary reference number	NO.94
Project Name	Private	Client Reference	N.P.
Sample Description	400x150x200 mm - Hollow Block One SIDE	Sample ID	3/1
Supplier	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sample Brt. In By	ACES's Rep.
Test Method	ASTM C140	Sampling Date	05/12/2022
Test Method Var.	N.P	Date Received	05/12/2022
Tested By	ACES's Rep.	Date Tested	06/12/2022

Dimensions:

Type	Size	Block No.	Dimensions				
			Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Hollow Block	400x150x200	1	400.0	150.0	200.0	30.7	30.8
	400x150x200	2	400.0	150.0	200.0	31.1	31.3
	400x150x200	3	400.0	150.0	200.0	31.1	30.85

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions			Net Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)
			Length (mm)	Width (mm)	Height (mm)					
Hollow Block	400x150x200	1	400	150	200	40695	2105.0	599.8	17404	14.7
	400x150x200	2	400	150	200	41994	2129.6	662.1	18001	15.8
	400x150x200	3	400	150	200	42600	2090.1	648.2	17930	15.2
Average										15.2

Notes

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Arab Company For Laboratories and Soil
Yazan Baraka
Materials Engineer

Arab Company For Laboratories and Soil
Eng. Mahmoud Jaber
Head of Materials Section

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تقرير اختبار

Partners for Quality Construction

Arab Company For Laboratories and Soil
الشركة العربية للمختبرات والتربة

Concrete Block Test Report For Fire Resistance

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	N.P	Sample No.	2
Project No.	N.P	Request No.	NO.94
Project Name	Private	Client Reference	Verbal

Sample Description	400x200x200 mm - Hollow Block BOTH SIDE	Sample ID	2/1
Sample Description	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sampling Date	5-Dec-2022
Test Method	ACI 216 (Calculation Method)	Sample Brt. In By	ACES's Rep.
Test Method Var.	N.P	Date Received	5-Dec-2022
Tested By	ACES' Rep	Date Tested	6-Dec-2022

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Hollow Block	1	400	200	200	26.2	25.1	2
	2	400	200	200	28.4	26.2	2
	3	400	200	200	25.9	27.3	2
						Average	2

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Concrete Block Test Report For Water Absorption

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	21-Dec-2022
Consultant	N.P	Sample No.	2
Project No.	N.P.	Request No.	NO.94
Project Name	Private	Client Reference	Verbal

Sample Description	400x200x200 mm - Hollow Block BOTH SIDE	Sample ID	2/1
Supplier	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sample Brt. In By	ACES's Rep.
Test Method	ASTM C140/C140M-20a	Date Received	5-Dec-2022
Tested By	ACES	Date Tested	7-Dec-2022

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Hollow Block	1	400.0	200.0	200.0	16253	17108	5.3
	2	400.0	200.0	200.0	17083	17874	4.6
	3	400.0	200.0	200.0	17211	18024	4.7

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Concrete Blocks Test Report

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	21/12/2022
Consultant	N.P	Sample No.	2
Project No.	N.P	temporary reference number	NO.94
Project Name	Private	Client Reference	N.P.

Sample Description	400x200x200 mm - Hollow Block BOTH SIDE	Sample ID	2/1
Supplier	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sample Brt. In By	ACES's Rep.
Test Method	ASTM C140	Sampling Date	05/12/2022
Test Method Var.	N.P	Date Received	05/12/2022
Tested By	ACES's Rep.	Date Tested	06/12/2022

Dimensions:

Type	Size	Block No.	Dimensions				
			Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Hollow Block	400x200x200	1	400.0	200.0	200.0	26.2	25.1
	400x200x200	2	400.0	200.0	200.0	28.4	26.2
	400x200x200	3	400.0	200.0	200.0	25.9	27.3

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions			Net Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)
			Length (mm)	Width (mm)	Height (mm)					
Hollow Block	400x200x200	1	400	200	200	36970	2177.0	387.5	16253	10.5
	400x200x200	2	400	200	200	38295	2204.1	567.3	17083	14.8
	400x200x200	3	400	200	200	38550	2205.2	501.2	17211	13.0
Average										12.8

Notes

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Arab Company For Laboratories and Soil
الشركة العربية للمختبرات والتربة

Concrete Block Test Report For Fire Resistance

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	N.P	Sample No.	1
Project No.	N.P	temporary reference number	NO.94
Project Name	Private	Client Reference	Verbal

Sample Description	400x150x200 mm - Hollow Block BOTH SIDE	Sample ID	1/1
Sample Description	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sampling Date	5-Dec-2022
Test Method	ACI 216 (Calculation Method)	Sample Brt. In By	ACES's Rep.
Test Method Var.	N.P	Date Received	5-Dec-2022
Tested By	ACES' Rep	Date Tested	6-Dec-2022

Test Results Of Fire Resistance

Type	Block No.	Dimensions					Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	Face (mm)	Web (mm)	
Hollow Block	1	400	150	200	31.1	32.8	2
	2	400	150	200	31.3	32.5	2
	3	400	150	200	28.4	30.5	2
						Average	2

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Materials Engineer

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Concrete Block Test Report For Water Absorption

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27-Dec-2022
Consultant	N.P	Sample No.	/1
Project No.	N.P.	temporary reference number	NO.94
Project Name	Private	Client Reference	Verbal

Sample Description	400x150x200 mm - Hollow Block BOTH SIDE	Sample ID	1/1
Supplier	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sample Brt. In By	ACES's Rep.
Test Method	ASTM C140/C140M-20a	Date Received	5-Dec-2022
Tested By	ACES	Date Tested	7-Dec-2022

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
Hollow Block	1	400.0	150.0	200.0	17301	18211	5.3
	2	400.0	150.0	200.0	17206	18124	5.3
	3	400.0	150.0	200.0	16857	17682	4.9

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Arab Company For Laboratories and Soil
الشركة العربية للمختبرات والتربة

Concrete Blocks Test Report

Client	Riyadh block factory	Report No.	-
Contractor	Riyadh block factory	Date Reported	27/12/2022
Consultant	N.P	Sample No.	1
Project No.	N.P	temporary reference number	NO.94
Project Name	Private	Client Reference	N.P.
Sample Description	400x150x200 mm - Hollow Block BOTH SIDE	Sample ID	1/1
Supplier	N.P	Sampled By	ACES's Rep.
Location	Jeddah	Sample Brt. In By	ACES's Rep.
Test Method	ASTM C140	Sampling Date	05/12/2022
Test Method Var.	N.P	Date Received	05/12/2022
Tested By	ACES's Rep.	Date Tested	06/12/2022

Dimensions:

Type	Size	Block No.	Dimensions				
			Length (mm)	Width (mm)	Height (mm)	Web (mm)	Face (mm)
Hollow Block	400x150x200	1	400.0	150.0	200.0	31.1	32.8
	400x150x200	2	400.0	150.0	200.0	31.3	32.5
	400x150x200	3	400.0	150.0	200.0	28.4	30.5

Test Results by Measured Dimensions:

Type	Size	Block No.	Dimensions			Net Area (mm^2)	Dry Density (Kg/m^3)	Maximum Load KN	Weight (g)	Compressive Strength (Individual) (Mpa)
			Length (mm)	Width (mm)	Height (mm)					
Hollow Block	400x150x200	1	400	150	200	39640	2182.3	536.7	17301	13.5
	400x150x200	2	400	150	200	39260	2191.3	512.5	17206	13.1
	400x150x200	3	400	150	200	37790	2230.4	570.2	16857	15.1
Average										13.9

Notes
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P.O. Box 9182, Jeddah 21413, KSA Telephone: +966 (12) 6715621 / 6176860 Fax: +966 (12) 6715426 Email: rgf-wp@erigeosciences.com
Location: Garnatha St. near Arbaeen St. intersection, Mushrefah District, Jeddah

TEST REPORT
CONCRETE BLOCK TEST RESULTS
ASTM C140-14a

CLIENT	: Riyadh Block Factory	LAB. REF. NO. :	22/000636/PJ
PROJECT	: --	SAMPLING DATE :	-
SUPPLIER NAME:	Riyadh Block Factory	TESTING DATE :	16.11.2022
SAMPLE NO. :	1	REPORT DATE :	16.11.2022

Required Limit
ASTM C129-05
Normal Weight Class (200mm)
Non Load Bearing

REFERENCE No.			1	2	3	
FACE SHELL THICKNESS		m	22	22	22	
WEB THICKNESS		m	22	22	22	
DIMENSIONS (mm)	LENGTH	(L)	400	400	400	
	WIDTH	(W)	200	200	200	
	HEIGHT	(H)	200	200	200	
AREA GROSS (cm^2)	GROSS		800.0	800.0	800.0	
AREA NET (cm^2)	NET		316.4	316.4	316.4	
LOAD (kN)			221.8	318.7	340.3	
GROSS CRUSHING STRENGTH		(MPa)	2.77	3.98	4.25	
NET CRUSHING STRENGTH		(MPa)	7.01	10.07	10.76	
AVERAGE STRENGTH (GROSS) =		3.67 MPa				
AVERAGE STRENGTH (NET) =		9.28 MPa				3.45 Min.

REMARKS : 1- Non load bearing concrete masonary units with 03 No's of hollow one end is open.
2- The specimens were supplied by the Client

TESTED BY : Tariq

CHECKED BY/REVIEWED BY : Syed Asad Abbas

APPROVED BY :
(LAB. INCHARGE)

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اختبار مقاومة الضغط · ASTM C140 · عينة 2

مختبرات RGF · نوفمبر 2022

تقرير اختبار

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Location: Garnatha St. near Arbaeen St. intersection, Mushrefah District, Jeddah

TEST REPORT
CONCRETE BLOCK TEST RESULTS
ASTM C140-14a

CLIENT : Riyadh Block Factory
PROJECT : --
SUPPLIER NAME: Riyadh Block Factory
SAMPLE NO. : 2

LAB. REF. NO. : 22/000636/PJ
SAMPLING DATE : -
TESTING DATE : 16.11.2022
REPORT DATE : 16.11.2022

Required Limit
ASTM C129-05
Normal Weight Class (200mm)
Non Load Bearing

			1	2	3	
REFERENCE No.						
FACE SHELL THICKNESS		m	30	30	30	
WEB THICKNESS		m	30	30	30	
DIMENSIONS (mm)	LENGTH	(L)	400	400	400	
	WIDTH	(W)	150	150	150	
	HEIGHT	(H)	200	200	200	
AREA GROSS (cm^2)	GROSS		600.0	600.0	600.0	
AREA NET (cm^2)	NET		348.0	348.0	348.0	
LOAD (kN)			356.5	465.8	451.3	
GROSS CRUSHING STRENGTH		(MPa)	5.94	7.76	7.52	
NET CRUSHING STRENGTH		(MPa)	10.24	13.39	12.97	
AVERAGE STRENGTH (GROSS) =			7.08	MPa		
AVERAGE STRENGTH (NET) =			12.20	MPa		3.45 Min.

REMARKS : 1- Non load bearing concrete masonary units with 03 No's of hollow one end is open.
2- The specimens were supplied by the Client

TESTED BY : Tariq
CHECKED BY/REVIEWED BY : Syed Asad Abbas
APPROVED BY :
(LAB. INCHARGE)

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اختبار مقاومة الضغط · ASTM C140 · عينة 3

مختبرات RGF · نوفمبر 2022

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Location: Garnatha St. near Arbaeen St. intersection, Mushrefah District, Jeddah

TEST REPORT
CONCRETE BLOCK TEST RESULTS
ASTM C140-14a

CLIENT	: Riyadh Block Factory	LAB. REF. NO. :	22/000636/PJ
PROJECT	: --	SAMPLING DATE :	-
SUPPLIER NAME:	Riyadh Block Factory	TESTING DATE :	16.11.2022
SAMPLE NO. :	3	REPORT DATE :	16.11.2022

Required Limit
ASTM C129-05
Normal Weight Class (200mm)
Non Load Bearing

			1	2	3	
REFERENCE No.						
FACE SHELL THICKNESS		m	30	30	30	
WEB THICKNESS		m	30	30	30	
DIMENSIONS (mm)	LENGTH	(L)	400	400	400	
	WIDTH	(W)	100	100	100	
	HEIGHT	(H)	200	200	200	
AREA GROSS (cm^2)	GROSS		400.0	400.0	400.0	
AREA NET (cm^2)	NET		288.8	288.8	288.8	
LOAD (kN)			317.2	314.7	351.3	
GROSS CRUSHING STRENGTH		(MPa)	7.93	7.87	8.78	
NET CRUSHING STRENGTH		(MPa)	10.98	10.90	12.16	
AVERAGE STRENGTH (GROSS) =			8.19 MPa			
AVERAGE STRENGTH (NET) =			11.35 MPa			3.45 Min.

REMARKS : 1- Non load bearing concrete masonary units with 03 No's of hollow one end is open.
2- The specimens were supplied by the Client

TESTED BY : Tariq

CHECKED BY/REVIEWED BY : Syed Asad Abbas

APPROVED BY : (LAB. INCHARGE)

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اختبار مقاومة الضغط · ASTM C140 · عينة 4

مختبرات RGF · نوفمبر 2022

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Location: Garnatha St. near Arbaeen St. intersection, Mushrefah District, Jeddah

TEST REPORT
CONCRETE BLOCK TEST RESULTS
ASTM C140-14a

CLIENT : Riyadh Block Factory
PROJECT : --
SUPPLIER NAME: Riyadh Block Factory
SAMPLE NO. : 4

LAB. REF. NO. : 22/000636/PJ
SAMPLING DATE : -
TESTING DATE : 16.11.2022
REPORT DATE : 16.11.2022

Required Limit
ASTM C129-05
Normal Weight Class (200mm)
Non Load Bearing

			1	2	3	
REFERENCE No.						
FACE SHELL THICKNESS		m	31	31	31	
WEB THICKNESS		m	31	31	31	
DIMENSIONS (mm)	LENGTH	(L)	400	400	400	
	WIDTH	(W)	200	200	200	
	HEIGHT	(H)	200	200	200	
AREA GROSS (cm^2)	GROSS		800.0	800.0	800.0	
AREA NET (cm^2)	NET		420.5	420.5	420.5	
LOAD (kN)			659.8	709.6	680.8	
GROSS CRUSHING STRENGTH	(MPa)		8.25	8.87	8.51	
NET CRUSHING STRENGTH	(MPa)		15.69	16.88	16.19	
AVERAGE STRENGTH (GROSS) =	8.54	MPa				
AVERAGE STRENGTH (NET) =	16.25	MPa				3.45 Min.

REMARKS : 1- Non load bearing concrete masonary units with 03 No's of hollow one end is open.
2- The specimens were supplied by the Client

TESTED BY : Tariq
CHECKED BY/REVIEWED BY : Syed Asad Abbas
APPROVED BY :
(LAB. INCHARGE)

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اختبار مقاومة الضغط · ASTM C140 · عينة 4 (نسخة مصدقة)

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Location: Garnatha St. near Arbaeen St. intersection, Mushrefah District, Jeddah

TEST REPORT
CONCRETE BLOCK TEST RESULTS
ASTM C140-14a

CLIENT	: Riyadh Block Factory	LAB. REF. NO. :	22/000636/PJ
PROJECT	: --	SAMPLING DATE :	-
SUPPLIER NAME:	Riyadh Block Factory	TESTING DATE :	16.11.2022
SAMPLE NO. :	4	REPORT DATE :	16.11.2022

Required Limit
ASTM C129-05
Normal Weight Class (200mm)
Non Load Bearing

			1	2	3	
REFERENCE No.						
FACE SHELL THICKNESS		m	31	31	31	
WEB THICKNESS		m	31	31	31	
DIMENSIONS (mm)	LENGTH	(L)	400	400	400	
	WIDTH	(W)	200	200	200	
	HEIGHT	(H)	200	200	200	
AREA GROSS (cm^2)	GROSS		800.0	800.0	800.0	
AREA NET (cm^2)	NET		420.5	420.5	420.5	
LOAD (kN)			659.8	709.6	680.8	
GROSS CRUSHING STRENGTH		(MPa)	8.25	8.87	8.51	
NET CRUSHING STRENGTH		(MPa)	15.69	16.88	16.19	
AVERAGE STRENGTH (GROSS) =			8.54 MPa			
AVERAGE STRENGTH (NET) =			16.25 MPa			3.45 Min.

REMARKS : 1- Non load bearing concrete masonary units with 03 No's of hollow one end is open.
2- The specimens were supplied by the Client

TESTED BY : Tariq

CHECKED BY/REVIEWED BY : Syed Asad Abbas

APPROVED BY :
(LAB. INCHARGE)

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اختبار مقاومة الضغط · مشروع هنجر صيانة الطائرات

مختبرات RGF · يناير 2023

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Location: Garnatha St. near Arbaeen St. intersection, Mushrefah District, Jeddah

TEST REPORT
CONCRETE BLOCK TEST RESULTS
ASTM C140-14a

CLIENT : Riyadh Block Factory
PROJECT : New Air Craft Maintenanace Hanger
SUPPLIER NAME: Riyadh Block Factory
SAMPLE NO. : 1

LAB. REF. NO. : 23/000024/PJ
SAMPLING DATE : -
TESTING DATE : 11.01.2023
REPORT DATE : 11.01.2023

Required Limit
ASTM C129-05
Normal Weight Class (200mm)
Non Load Bearing

REFERENCE No.			1	2	3	
FACE SHELL THICKNESS		m	42	42	42	
WEB THICKNESS		m	42	42	42	
DIMENSIONS (mm)	LENGTH	(L)	400	400	400	
	WIDTH	(W)	200	200	200	
	HEIGHT	(H)	200	200	200	
AREA GROSS (cm^2)	GROSS		800.0	800.0	800.0	
AREA NET (cm^2)	NET		485.6	485.6	485.6	
LOAD (kN)			887.9	795.0	778.0	
GROSS CRUSHING STRENGTH (MPa)			11.10	9.94	9.73	
NET CRUSHING STRENGTH (MPa)			18.28	16.37	16.02	
AVERAGE STRENGTH (GROSS) = 10.25 MPa						
AVERAGE STRENGTH (NET) = 16.89 MPa						3.45 Min.

REMARKS : 1- Non load bearing concrete masonary units with 02 No's of hollow one end is open.
2- The specimens were supplied by the Client

TESTED BY : Faiyaz Ahmad
CHECKED BY/REVIEWED BY : Syed Asad Abbas
APPROVED BY (LAB. INCHARGE)

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RIYADH GEOTECHNIQUE & FOUNDATIONS CO.

TEST REPORT
CHEMICAL ANALYSIS OF WATER

CLIENT :	RIYADH BLOCK FACTORY JEDDAH		
PROJECT :	-		
LOCATION :	-	RECEIVING DATE :	16.11.2022
SAMPLE NO.:	01	PROPOSED FOR :	Concrete
SAMPLED BY :	CLIENT	SAMPLING DATE :	13.11.2022
ENV. CONDITION TEMP. :	25.5 °C	HUMIDITY :	45%
LAB. REF. No. :	CHJ-22/232 (W-1)	REPORT DATE :	21.11.2022

NO.	DESCRIPTION OF WORK	RESULT	UNIT	LIMITS	STANDARD
1	PH at 25° C	7.33	--	6.5~8.5	4500-H-B
2	Total Dissolved Solids (TDS)	113	mg/L	1000	2540-C
3	Sulfate (SO_4)	2.00	mg/L	250	4500-SO_4-E
4	Chloride (Cl)	55	mg/L	250	4500-Cl-C

REMARKS :

TESTED BY : Ibrahim REVIEWED BY / CHECKED BY :

APPROVED BY : CHEMIST INCHARGE

RGF-JED-CHE-WATER-02-00
01.01.2013

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تقرير العزل الصوتي · بلك مفرّغ 20 سم · STC 47 · صفحة 1 من 5

مختبرات ACES · ASTM E90 · مايو 2019

تقرير اختبار

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الشركة العربية للمختبرات والتربة

Partners for Quality Construction

Riyadh Block Factory
Jeddah, KSA

Our ref : JMQ19002394-2
Date : 09 May 2019

Attention : Mr. Mahmood
Email : sales@rbf.sa
Mobile : 055 508 0197
Subject : Sound Transmission Class Test - Hollow Block 20 cm

Dear Sir,

According to your request on April 29, 2019, acoustical analysis of Sound Transmission Class test was carried out by ACES on hollow concrete block. This report presents the results of acoustical testing the weight wall partitions.

In the event that additional information or clarifications are required, please contact our office at your convenience. We would like to take this opportunity to thank you for your confidence and look forward to be of service to you in the near future.

Kind regards,

Farid W. Ghadieh
Branch Manager – Jeddah
For Arab Company for Laboratories and Soil

Arab Company For Laboratories and Soil C.R. 4030157586 Material Department
الشركة العربية للمختبرات والتربة س.ت ٤٠٣٠١٥٧٥٨٦ جدة خاص بالتقارير

س.ت ٤٠٣٠١٥٧٥٨٦ رقم العضوية ١٠٦٩٣٤ ص.ب ١٣٢٩٠٥ جدة ٢١٣٨٢ هاتف ٩٦٦١٢٦٦٤١٤٢٢
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Riyadh Tel: 011-2372222 | Al Khobar Tel: 013 8811841 | Najran Tel: 017 5239037 | Buraydah Tel: 016 3844575 | Madinah Tel: 14 8693326
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IAS ACCREDITED Testing Laboratory

تقرير العزل الصوتي · بلك مفرّغ 20 سم · STC 47 · صفحة 2 من 5

مختبرات ASTM E90 · ACES · مايو 2019

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1.0 Introduction:

According to your request on April 29, 2019, acoustical analysis of Sound Transmission Class test was carried out by ACES on hollow concrete block. This report presents the results of acoustical testing the weight wall partitions.

2.0 Tests Carried Out

"Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements" was carried out on one material as described in the attached figures according to ASTM E90-16.

3.0 Test Partitions

One partition was installed by the client according to ASTM E90-16 standard and tested for the sound insulation and the details are below:

- 200 mm thickness Hollow Concrete Block (2.6 x 2.6 m).

4.0 Test Procedure

The measurements were carried out according to the method set forth in ASTM E90-16. The STC value was obtained by applying the Transmission Loss (TL) values to the STC reference contour of ASTM: E413-16, "Classification for Rating Sound Insulation" The actual transmission loss at each frequency was calculated by the following equation:

$TL = NR + 10 \log S - 10 \log A_2$

where:

TL = Field Transmission Loss (dB)

NR = Noise Reduction (dB) ($L_1 - L_2$)

S = Surface area common to both sides (m^2)

A_2 = Sound absorption of the receiving room with the sample in place (m^2)

5.0 Test Equipment:

Item Description	Manufacturer/Model	Calibration Due
Type 1 Sound & Vibration Analyzer including: 1/1 & 1/3 octave filter, Time Domain Signal recording, FFT, RT60, Signal generator	SVANTEK/SVAN 979	08-04-2019
Noise signal generator and external signal amplification.	QSource/ Qam	-

هاتف ٩٦٦١٢٦٦٤١٤٢٢ جدة ٢١٢٨٢ ص.ب ١٣٢٩٠٥ رقم العضوية ١٠٦٩٣٤ س.ت ٤٠٣٠١٥٧٥٨٦
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تقرير العزل الصوتي · بلك مفرّغ 20 سم · STC 47 · صفحة 3 من 5

مختبرات ACES · ASTM E90 · مايو 2019

تقرير اختبار

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6.0 Test Results Summary:

1. 200 mm thickness hollow Concrete Block (2.6 x 2.6 m).

Sound Transmission Class (STC) Test				Test Results		Project Specification
Sample No.	Partitions Made of	Location	Area of Test Partition (m^2)	STC*	Deficiency (dB)	Masonry Assemblies Page 2 of 13 150 mm Hollow Block
Wall - 1	Hollow Concrete Block wall 200 mm Thick	ACES Lab	6.76 Panel	29.1	47	47 STC

*Tabular and graphical presentations of the data are presented under "TEST RESULTS" below.

7.0 Test Report Limitations:

a. The testing described, the results calculated and this report fully comply with requirements of ASTM E669-16a.

b. The results stated in this report represent only the specific construction and acoustical conditions present at the time of the test. Measurements performed in accordance with this standard on nominally identical constructions and acoustical conditions may produce different results.

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Material Department

س.ت ٤٠٣٠١٥٧٥٨٦ رقم العضوية ١٠٦٩٣٤ ص.ب ١٣٢٩٠٥ جدة ٢١٣٨٢ هاتف ٩٦٦١٢٦٦٤١٤٢٢
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مختبرات ACES · ASTM E90 · مايو 2019

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Partners for Quality Construction

TEST RESULTS

Report No.	JMR19002394-2	Request No.	JMQ19001564
Client Name	Riyadh Block Factory		
Partition Area	Hollow Concrete Block - Wall 200 mm	Area (m^2)	6.76
Source Room	ACES ATR-1	Humidity (%)	-
Volume (m^3)	75	Temp. (C°)	20
Receiving Room	ACES ATR-2	Humidity (%)	-
Volume (m^3)	75	Temp. (C°)	20
Operator	Shareef Murad		
Witness By	Eng. Talal (ABV Rock)		

1/3 Octave-Band Frequency (Hz)	Adjustment for Contour Level (dB)	Contour Level (dB)	TL (dB)	Deficiency (dB)	Max Deficiency ≤ 8 dB
125	3	31	29.1	1.9	OK
160	3	34	32.1	1.9	OK
200	3	37	31.8	5.2	OK
250	3	40	34.6	5.4	OK
315	3	43	36.9	6.1	OK
400	1	46	40.1	5.9	OK
500	1	47	44.3	2.7	OK
630	1	48	50.6	0	OK
800	1	49	55.3	0	OK
1000	1	50	57.0	0	OK
1250	0	51	60.0	0	OK
1600	0	51	64.5	0	OK
2000	0	51	67.9	0	OK
2500	0	51	67.4	0	OK
3150	0	51	66.9	0	OK
4000	0	51	70.6	0	OK
			TOTAL	29.1	
			Wall is STC:		47

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ACES JEDDAH/ACES2019/JMR19002394-2 4 of 5

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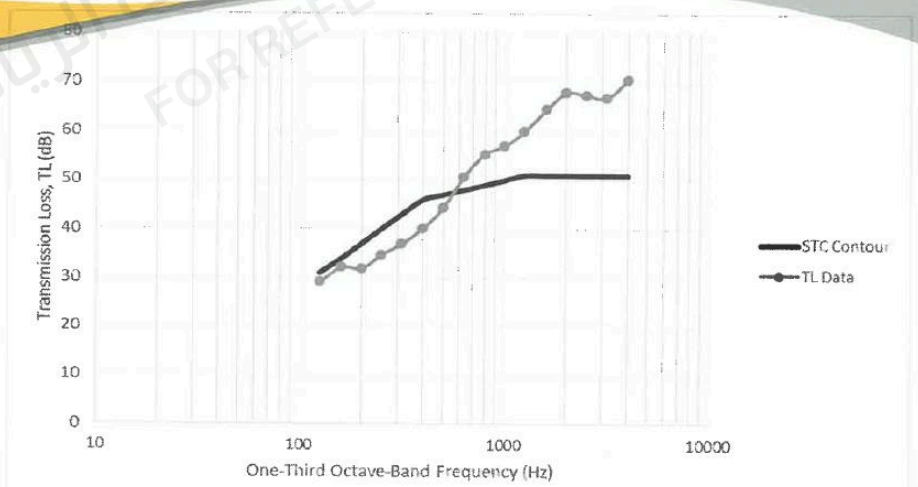
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Riyadh Block Factory
Jeddah, KSA

Our ref : JMQ19002394-1
Date : 09 May 2019

Attention : Mr. Mahmood
Email : sales@rbf.sa
Mobile : 055 508 0197
Subject : Sound Transmission Class Test - Hollow Block 15 cm

Dear Sir,

According to your request on April 29, 2019, acoustical analysis of Sound Transmission Class test was carried out by ACES on hollow concrete block. This report presents the results of acoustical testing the weight wall partitions.

In the event that additional information or clarifications are required, please contact our office at your convenience. We would like to take this opportunity to thank you for your confidence and look forward to be of service to you in the near future.

Kind regards,

Farid W. Ghadieh
Branch Manager – Jeddah
For Arab Company for Laboratories and Soil

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1.0 Introduction:

According to your request on April 29, 2019, acoustical analysis of Sound Transmission Class test was carried out by ACES on hollow concrete block. This report presents the results of acoustical testing the weight wall partitions.

2.0 Tests Carried Out

"Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements" was carried out on one material as described in the attached figures according to ASTM E90-16.

3.0 Test Partitions

One partition was installed by the client according to ASTM E90-16 standard and tested for the sound insulation and the details are below:

- 150 mm thickness Hollow Concrete Block (2.6 x 2.6 m).

4.0 Test Procedure

The measurements were carried out according to the method set forth in ASTM E90-16. The STC value was obtained by applying the Transmission Loss (TL) values to the STC reference contour of ASTM: E413-16, "Classification for Rating Sound Insulation" The actual transmission loss at each frequency was calculated by the following equation:

$TL = NR + 10 \log S - 10 \log A_2$

where:

TL = Field Transmission Loss (dB)

NR = Noise Reduction (dB) ($L_1 - L_2$)

S = Surface area common to both sides (m^2)

A_2 = Sound absorption of the receiving room with the sample in place (m^2)

5.0 Test Equipment:

Item Description	Manufacturer/Model	Calibration Due
Type 1 Sound & Vibration Analyzer including: 1/1 & 1/3 octave filter, Time Domain Signal recording, FFT, RT60, Signal generator	SVANTEK/SVAN 979	08-04-2019
Noise signal generator and external signal amplification.	QSource/ Qam	-

هاتف ٩٦٦١٢٦٦٤١٤٢٢ جدة ٢١٤٨٢ ص.ب ١٣٢٩٠٥ رقم العضوية ١٠٦٩٣٤ ٤٠٣٠١٥٧٥٨٦
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6.0 Test Results Summary:

1. 150 mm thickness hollow Concrete Block (2.6 x 2.6 m).

Sound Transmission Class (STC) Test				Test Results		Project Specification
Sample No.	Partitions Made of	Location	Area of Test Partition (m^2)	STC*	Deficiency (dB)	Masonry Assemblies Page 2 of 13 150 mm Hollow Block
Wall - 1	Hollow Concrete Block wall 150 mm Thick	ACES Lab	6.76 Panel	30.1	45	45 STC

*Tabular and graphical presentations of the data are presented under "TEST RESULTS" below.

7.0 Test Report Limitations:

a. The testing described, the results calculated and this report fully comply with requirements of ASTM E669-16a.

b. The results stated in this report represent only the specific construction and acoustical conditions present at the time of the test. Measurements performed in accordance with this standard on nominally identical constructions and acoustical conditions may produce different results.

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TEST RESULTS

Report No.	JMR19002394	Request No.	JMQ19001564
Client Name	Riyadh Block Factory		
Partition Area	Hollow Concrete Block - Wall 150 mm	Area (m^2)	6.76
Source Room	ACES ATR-1	Humidity (%)	-
Volume (m^3)	75	Temp. (C°)	20
Receiving Room	ACES ATR-2	Humidity (%)	-
Volume (m^3)	75	Temp. (C°)	20
Operator	Shareef Murad		
Witness By	Eng. Talal (ABV Rock)		

1/3 Octave-Band Frequency (Hz)	Adjustment for Contour Level (dB)	Contour Level (dB)	TL (dB)	Deficiency (dB)	Max Deficiency ≤ 8 dB
125	3	29	25.8	3.2	OK
160	3	32	28.7	3.3	OK
200	3	35	27.5	7.5	OK
250	3	38	31.4	6.6	OK
315	3	41	35.3	5.7	OK
400	1	44	40.7	3.3	OK
500	1	45	44.5	0.5	OK
630	1	46	48.8	0	OK
800	1	47	49.2	0	OK
1000	1	48	53.0	0	OK
1250	0	49	55.7	0	OK
1600	0	49	61.0	0	OK
2000	0	49	62.5	0	OK
2500	0	49	63.9	0	OK
3150	0	49	63.6	0	OK
4000	0	49	66.0	0	OK
			TOTAL	30.1	
			Wall is STC:		45

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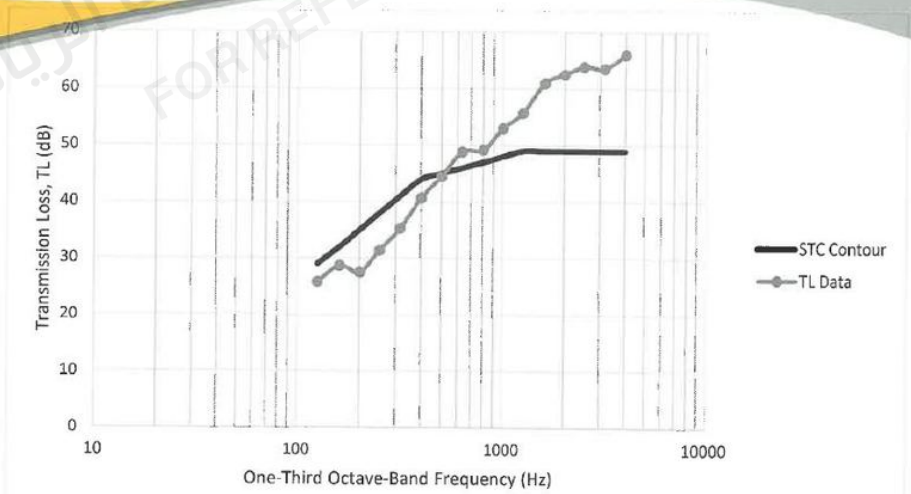
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Hollow Concrete Block Test Report For Fire Resistance

Client	Riyadh Block Factory	Report No.	JMR20006437
Contractor	Riyadh Block Factory	Date Reported	21-Jun-2020
Consultant	N.P	Sample No.	JMS20001882
Project No.	N.P	Request No.	JMQ20001169
Project Name	Private	Client Reference	Verbal
Sample Description	Hollow Blocks	Sampled By	Client's Rep.
Supplier	N.P	Sampling Date	20-Jun-2020
Test Method	ACI 216 (Calculation Method)	Sample Brt. In By	Client's Rep.
Test Method Var.	N.P	Date Received	20-Jun-2020
Tested By	ACES	Date Tested	20-Jun-2020

Test Results Of Fire Resistance

Type	Block No.	Dimensions			Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	
400*200*200	1.Sample (2.5cm)	397	198	200	2.8
	2.Sample (2.0cm)	398	197	196	2.2

Arab Company For Laboratories and Soil
Eng Tariq Ameen Diab
QA/QC Department Manager

Arab Company For Laboratories and Soil
Eng. Ayman Tanninah
Material Department Manager

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Hollow Concrete Block Test Report For Water Absorption

Client	Riyadh Block factory	Report No.	JMR20007962
Contractor	Riyadh Block factory	Date Reported	16-Jul-2020
Consultant	N.P	Sample No.	JMS20002241
Project No.	N.P	Request No.	JMQ20001359/2
Project Name	Private	Client Reference	Verbal

Sample Description	Isolated Block (20 cm)	Sampled By	Client's Rep.
Supplier	N.P	Sampling Date	15-Jul-2020
Test Method	ASTM C140	Sample Brt. In By	Client's Rep.
Test Method Var.	N.P	Date Received	15-Jul-2020
Tested By	ACES	Date Tested	16-Jul-2020

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
400x150x200	1	400	201	200	16092.0	18103.0	12.5
	2	400	200	200	16114.0	18112.0	12.4
	3	400	200	201	16128.0	18109.0	12.3

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Eng.Tariq Diab
QA/QC Department Manager

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Eng. Ayman Tanninah
Material Department Manager

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اختبار امتصاص الماء · بلك مفرّغ 20 سم

مختبرات ACES · ASTM C140 · يناير 2020

تقرير اختبار

Arab Company For Laboratories and Soil الشركة العربية للمختبرات والتربة

Partners for Quality Construction

Hollow Concrete Block Test Report For Water Absorption

Client	Riyadh Block factory	Report No.	JMR20007962
Contractor	Riyadh Block factory	Date Reported	16-Jul-2020
Consultant	N.P	Sample No.	JMS20002241
Project No.	N.P	Request No.	JMQ20001359/1
Project Name	Private	Client Reference	Verbal

Sample Description	Hollow Block (20 cm)	Sampled By	Client's Rep.
Supplier	N.P	Sampling Date	15-Jul-2020
Test Method	ASTM C140	Sample Brt. In By	Client's Rep.
Test Method Var.	N.P	Date Received	15-Jul-2020
Tested By	ACES	Date Tested	16-Jul-2020

Test Results Of Water Absorption:

Type	Block No.	Dimensions					Water Absorption %
		Length (mm)	Width (mm)	Height (mm)	Dry Wg.	SSD Wg.	
400x150x200	1	400	200	200	17705.0	19227.0	8.6
	2	400	201	200	17811.0	19229.0	8.0
	3	400	201	200	17783.0	19230.0	8.1

Arab Company For Laboratories and Soil
Eng.Tariq Diab
QA/QC Department Manager

Arab Company For Laboratories and Soil
Eng. Ayman Tanninah
Material Department Manager

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to the joint ISO-ILAC-IAF Communiqué dated January 2009).

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مقاومة الحريق لوحدات البناء · مشروع مستشفى قوى الأمن ذهبان

مختبرات NCMA TEK · SAFCO · فبراير 2021

تقرير اختبار

Fire Resistance of Concrete Masonry Unit

TEST REF: NCMA TEK

PROJECT	Security Hospital -Dhaban (ABV Rock Group Co.)	**DATE**	10-Feb-2021
CLIENT	Riyadh Block Factory	**REF**	SMF-4918
LOCATION	Dhaban, Jeddah, Kingdom of Saudi Arabia		-

Masonry Unit Actual Dimension				
Length	40.0	Net Area	408.00	cm^2
Height	20.0 cm	Net Volume	8160.0	cm^3
Width	20.0 cm	Gross Volume	16000.0	cm^3
% Soild	51.0 %	Equiv.Thickness= %solid x eq. Thi	102.0	mm

Date Cast		Web Thickness	3.0	cm
Date Received	10 February 2021	Face Shell Thckness	3.0	cm
Date Tested	10 February 2021	Number of cell	3	cell

The fire resistance rating of the concrete masonry unit is determined by "Calculation Method" in compliance to the standard given in the Engineering Bulletin from National Masonry Association (NCMA). The calculation method determined fire resistance rating based on the equivalent thickness of concrete masonry unit and aggregates types used in their manufacture. The standard established a relationship between fire resistance rating and the equivalent thickness of concrete masonry units.

Aggregate type used in the Concrete Masonry Units

Sample No.	Full size Units (Test Specimen Nominal Size)	Equivalent Thickness mm	Fire Resistance Rating hours
1	Length = 40 cm	102.0	3.0
	Width = 20 cm		
	Height = 20 cm		
Average			

Remarks:

Sample were delivered by client to our laboratory. Information provided by the client

Supplier:

TEST PERFORMED BY :		CHECKED BY :	
NAME	Usman	NAME	M. B. Coronado
SIGNATURE		SIGNATURE	
DATE	10 February 2021	DATE	10 February 2021

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مقاومة الحريق لوحدات البناء · ضبط الجودة

مختبرات NCMA TEK · SAFCO · فبراير 2021

تقرير اختبار

Fire Resistance of Concrete Masonry Unit

TEST REF: NCMA TEK

PROJECT	Quality Control Test	DATE	10-Feb-2021
CLIENT	Riyadh Block Factory	REF	SMF-4918
LOCATION	Usfan, Jeddah, Kingdom of Saudi Arabia		-

Masonry Unit Actual Dimension				
Length	40.0	Net Area	408.00	cm^2
Height	20.0 cm	Net Volume	8160.0	cm^3
Width	20.0 cm	Gross Volume	16000.0	cm^3
% Soild	51.0 %	Equiv.Thickness= %solid x eq. Thi	102.0	mm

Date Cast		Web Thickness	3.0	cm
Date Received	10 February 2021	Face Shell Thckness	3.0	cm
Date Tested	10 February 2021	Number of cell	3	cell

The fire resistance rating of the concrete masonry unit is determined by "Calculation Method" in compliance to the standard given in the Engineering Bulletin from National Masonry Association (NCMA). The calculation method determined fire resistance rating based on the equivalent thickness of concrete masonry unit and aggregates types used in their manufacture. The standard established a relationship between fire resistance rating and the equivalent thickness of concrete masonry units.

Aggregate type used in the Concrete Masonry Units

Sample No.	Full size Units (Test Specimen Nominal Size)	Equivalent Thickness mm	Fire Resistance Rating hours
1	Length = 40 cm	102.0	3.0
	Width = 20 cm		
	Height = 20 cm		
Average			

Remarks:

Sample were delivered by client to our laboratory. Information provided by the client

Supplier:

TEST PERFORMED BY :		CHECKED BY :	
NAME	Usman	NAME	M. B. Coronado
SIGNATURE		SIGNATURE	
DATE	10 February 2021	DATE	10 February 2021

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مقاومة الحريق لوحدات البناء

مختبرات NCMA TEK · SAFCO · أكتوبر 2019

تقرير اختبار

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Fire Resistance of Concrete Masonry Units

TEST REF: NCMA TEK

PROJECT	Quality Control Test	**DATE**	28-Oct-2019
CLIENT	Riyadh Block Factory	**REF**	SMF-4918
LOCATION	Usfan, Jeddah, Kingdom of Saudi Arabia		-

Masonry Unit Actual Dimension			
Length	40.0 cm	Net Area	669.60 cm^2
Height	20.0 cm	Net Volume	13392.0 cm^3
Width	30.0 cm	Gross Volume	24000.0 cm^3
% Soild	55.8 %	Equiv.Thickness= %solid x eq. Thi	167.4 mm

Date Cast		Dimension of Insulation	32.0 x 5.7 cm
Date Received	28 October 2019	Dimension of other hole	14.50 x 6.0 cm
Date Tested	28 October 2019	Number of hole	5 cell

The fire resistance rating of the concrete masonry unit is determined by "Calculation Method" in compliance to the standard given in the Engineering Bulletin from National Masonry Association (NCMA). The calculation method determined fire resistance rating based on the equivalent thickness of concrete masonry unit and aggregates types used in their manufacture. The standard established a relationship between fire resistance rating and the equivalent thickness of concrete masonry units.

Aggregate type used in the Concrete Masonry Units : Slag

Sample No.	Full size Units (Test Specimen Nominal Size)	Equivalent Thickness mm	Fire Resistance Rating hours
1	Length = 40 cm	167.4	4.0
	Width = 30 cm		
	Height = 20 cm		
Average			

Remarks:

Sample were delivered by client to our laboratory. Information provided by the client

Supplier:

TEST PERFORMED BY :		CHECKED BY :	
NAME	Usman	NAME	M. B. Coronado
SIGNATURE		SIGNATURE	
DATE	28 October 2019	DATE	28 October 2019

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مقاومة الضغط · هوردي بركاني

مختبرات ASTM C129 · SAFCO · ديسمبر 2019

تقرير اختبار

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Compressive Strength of Burkani Hordi Block

PROJECT	Quality Control Test	**DATE**	2-Dec-2019
CLIENT	Riyadh Block Factory	**REF**	SMF-4918
LOCATION	Palestine street, Jeddah, Kingdom of Saudi Arabia		

Burkani Hordi Block Dimensions			
Length	39.5/36 cm	Net Area	355.5 cm^2
Height	20.0 cm	Net Volume	7110.0 cm^3
Width	20.0 cm	Gross Volume	15100.0

Date Cast		Web Thickness	3.0 cm
Date Received	30 November 2019	Face Shell Thckness	3.0 cm
Date Tested	02 December 2019	Number of cell	2 cell

Sample No.	Sample Description	Age *(days)*	Weight *(gm)*	Density *gm/cm³*	Load *(kN)*	Strength *(MPa)*
1	Burkani Hordi Block (40/36 x 20 x 20)	-	13,949	1.962	175.9	4.95
2	Close Bottom	-	13,874	1.951	195.6	5.50
-	- nothing follows -	-	-	-	-	-
				Average	**185.8**	**5.23**

ASTM C 129 Requirements for Non-Load Bearing Concrete Masonry Unit

	Compressive Strength based on Net Area (MPa)
Average of 3 units	4.14
Individual unit	3.45

Remarks: Sample tested comforms with the requirements of ASTM C 129

TEST PERFORMED BY :		**CHECKED BY :**	
NAME	Usman	NAME	M. B. Coronado
SIGNATURE		SIGNATURE	
DATE	02 December 2019	DATE	02 December 2019

LAB Jeddah
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مقاومة الحريق وامتصاص الماء · هوردي بركاني · صفحة 1 من 2

مختبرات NCMA TEK · SAFCO · ديسمبر 2019

تقرير اختبار

Compressive Strength of Burkani Hordi Block

PROJECT	Quality Control Test	**DATE**	2-Dec-2019
CLIENT	Riyadh Block Factory	**REF**	SMF-4918
LOCATION	Palestine street, Jeddah, Kingdom of Saudi Arabia		

Burkani Hordi Block Dimensions			
Length	39.5/36 cm	Net Area	355.5 cm^2
Height	20.0 cm	Net Volume	7110.0 cm^3
Width	20.0 cm	Gross Volume	15100.0

Date Cast		Web Thickness	3.0 cm
Date Received	30 November 2019	Face Shell Thckness	3.0 cm
Date Tested	02 December 2019	Number of cell	2 cell

Sample No.	Sample Description	Age *(days)*	Weight *(gm)*	Density *gm/cm^3*	Load *(kN)*	Strength *(MPa)*
1	Burkani Hordi Block (40/36 x 20 x 20)	-	13,949	1.962	175.9	4.95
2	Close Bottom	-	13,874	1.951	195.6	5.50
-	- nothing follows -	-	-	-	-	-
				Average	**185.8**	**5.23**

ASTM C 129 Requirements for Non-Load Bearing Concrete Masonry Unit

	Compressive Strength based on Net Area (MPa)
Average of 3 units	4.14
Individual unit	3.45

Remarks: Sample tested comforms with the requirements of ASTM C 129

TEST PERFORMED BY :		**CHECKED BY :**	
NAME	Usman	NAME	M. B. Coronado
SIGNATURE		SIGNATURE	
DATE	02 December 2019	DATE	02 December 2019

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مقاومة الحريق وامتصاص الماء · هوردي بركاني · صفحة 2 من 2

مختبرات NCMA TEK · SAFCO · ديسمبر 2019

تقرير اختبار

Absoption Test of Burkani Hordi Block

PROJECT	Quality Control Test	**DATE**	2-Dec-2019
CLIENT	Riyadh Block Factory	**REF**	SMF-4918
LOCATION	Palestine street, Jeddah, Kingdom of Saudi Arabia	**T. REF**	
DESCRIPTION	Burkani Hordi Block (40/36 x 20 x 20)		

Test No.		1		
Weight of sample (Oven dry)	*gm*	13,924.0		
Weight of sample (S.S.D.)	*gm*	15,123.0		
Weight of water absorbed	*gm*	1199.0		
Absorption after immersion	%	8.6		

TEST PERFORMED BY:		**CHECKED BY:**	
NAME	Usman	NAME	M. B. Coronado
SIGNATURE		SIGNATURE	
DATE	2-Dec-2019	DATE	2-Dec-2019

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مقاومة الضغط · بلك 20 سم · يطابق ASTM C90 (حامل)

مختبرات ASTM C90 · SAFCO · ديسمبر 2019

تقرير اختبار

نسخة للاطلاع فقط / مرجع بلك الرياض
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Compressive Strength of Concrete Masonry Units

PROJECT	Quality Control Test	**DATE**	11-Dec-2019
CLIENT	Riyadh Block Factory	**REF**	SMF-4918
LOCATION	Palestine street, Jeddah, Kingdom of Saudi Arabia		

Concrete Masonry Units			
LENGTH	40.0 cm	NET AREA	464.00 cm^2
HEIGHT	20.0 cm	NET VOLUME	9280.0 cm^3
WIDTH	20.0 cm		

DATE CAST		Web Thickness	4.0 cm
DATE RECEIVED	11 December 2019	Face Shell Thckness	4.0 cm
DATE TESTED	11 December 2019	Number of cell	2 cell

Sample No.	Sample Description	Age *(days)*	Weight *(gm)*	Density *gm/cm³*	Load *(kN)*	Strength *(MPa)*
A - 1	Concrete Masonry Units (40 x 20 x 20)	-	23,400	2.522	702.7	15.14
	(Closed Bottom)					

ASTM C 90 Requirements for Load Bearing Concrete Masonry Units

	Compressive Strength based on Net Area (MPa)
Average of 3 units	13.1
Individual unit	11.7

Remarks: Sample tested comforms with the requirements of ASTM C 90

Supplier :

TEST PERFORMED BY :		**CHECKED BY :**	
NAME	Naveed	NAME	M. B. Coronado
SIGNATURE		SIGNATURE	
DATE	11 December 2019	DATE	11 December 2019

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مقاومة الحريق · بلك مصمت 10 سم

مختبرات ACES · مارس 2018

تقرير اختبار

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الشركة العربية للمختبرات والتربة

Partners for Quality Construction

Solid Concrete Block Test Report For Fire Resistance

Client	Riyadh Block Factory - Jeddah	**Report No.**	JMR18001495 R 1
Contractor	Riyadh Block Factory - Jeddah	**Date of Revision**	21-May--2019
Consultant	N.P	**Sample No.**	JMS18000496
Project No.	N.P	**Request No.**	JMQ18000481
Project Name	Private	**Client Reference**	Verbal

Sample Description	Solid Blocks	**Sampled By**	Client's Rep.
Test Method	NBC (Section 2.6.1)	**Sample Brt. In By**	Client's Rep.
Test Method Var.	N.P	**Date Received**	3-Mar-2018
Tested By	ACES	**Date Tested**	3-Mar-2018

Test Results Of Fire Resistance

Type	Block No.	Dimensions			Fire Resistance (Hours)
		Length (mm)	Width (mm)	Height (mm)	
400x100x200	1	402	100.1	199.50	2.127

Arab Company For Laboratories
Eng. AYMAN A. TANNINAH
Material Departments Manager

Arab Company For Laboratories and Soil
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C.R. 4030157586 جدة س.ت ٤٠٣٠١٥٧٥٨٦
Material Department خاص بالتقارير

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TAD/ACES JEDDAH/ACES 2017 /JMR2017/JMR17005699
1 of 1

اختبار التوصيل الحراري · بلك معزول (عازل 5 سم)

مختبرات ASTM D5334 · SAFCO · يناير 2018

تقرير اختبار

نسخة للاطلاع فقط | مصنع بلك الرياض
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Thermal Conductivity Test for Concrete Masonry Unit

TEST REFERENCE: ASTM D 5334

PROJECT	Quality Control Test	**DATE**	17-Jan-2018
CLIENT	Riyadh Block Factory	**REF No.**	SMF-4918
LOCATION	Palestine street, Jeddah, Kingdom of Saudi Arabia	**EQPT. USE**	KD-2 Pro
SAMPLE	Insulated Conrete Masonry Units (40 x 20 x 20 cm) with 5.0 cm insulation		

	Test Parameters	unit	Test Result			
			1			
1	Length of Sample	mm	400			
2	Width of Sample	mm	200			
3	Height of Sample	mm	200			
4	Face Shell Thickness	mm	30			
5	Insulation Thickness	mm	55			
6	Thermal Conductivity of Block(λ_c)	W/m-^{0}K	0.368			
7	Thermal Conductivity of EPS(λ_{EPS})	W/m-^{0}K	0.033			
8	Thermal Conductivity of Air(λ_a)	W/m-^{0}K	0.0257			
9	Thermal Resistance for Insulated Blocks (R-Value)	m^2-^{0}K/W	4.983			
10	Thermal Transmittance for Insulated Blocks (U-Value)	W/m^2-^{0}K	0.201			

REMARKS Sample delivered by client to SAFCO laboratory, Information provided by the client

TESTED BY :		**CHECKED BY :**	
NAME	Usman	NAME	M. Coronado
SIGNATURE		SIGNATURE	
DATE	17 January 2018	DATE	17 January 2018

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SOIL & FOUNDATION CO. LTD.

اختبار التوصيل الحراري · بلك معزول (عازل 7 سم)

مختبرات SAFCO · ASTM D5334 · يناير 2018

تقرير اختبار

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Thermal Conductivity Test for Concrete Masonry Unit

TEST REFERENCE: ASTM D 5334

PROJECT	Quality Control Test	**DATE**	17-Jan-2018
CLIENT	Riyadh Block Factory	**REF No.**	SMF-4918
LOCATION	Palestine street, Jeddah, Kingdom of Saudi Arabia	**EQPT. USE**	KD-2 Pro
SAMPLE	Insulated Conrete Masonry Units (40 x 20 x 20 cm) with 7.0 cm insulation		

	Test Parameters	unit	Test Result			
			1			
1	Length of Sample	mm	400			
2	Width of Sample	mm	200			
3	Height of Sample	mm	200			
4	Face Shell Thickness	mm	26			
5	Insulation Thickness	mm	70			
6	Thermal Conductivity of Block(λ_c)	W/m-^{0}K	0.355			
7	Thermal Conductivity of EPS(λ_{EPS})	W/m-^{0}K	0.030			
8	Thermal Conductivity of Air(λ_a)	W/m-^{0}K	0.0257			
9	Thermal Resistance for Insulated Blocks (R-Value)	m^2-^{0}K/W	5.837			
10	Thermal Transmittance for Insulated Blocks (U-Value)	W/m^2-^{0}K	0.171			

REMARKS Sample delivered by client to SAFCO laboratory, Information provided by the client

TESTED BY :		CHECKED BY :	
NAME	Usman	NAME	M. Coronado
SIGNATURE		SIGNATURE	
DATE	17 January 2018	DATE	17 January 2018

شركة التربة والاساسات المحدودة
SOIL & FOUNDATION CO. LTD.

اختبار التوصيل الحراري · بلك معزول (عازل 5.5 سم)

مختبرات ASTM D5334 · SAFCO · يناير 2018

تقرير اختبار

نسخة للاطلاع فقط | مصنع بلك الرياض
FOR REFERENCE ONLY · rbf.sa

Thermal Conductivity Test for Concrete Masonry Unit

TEST REFERENCE: ASTM D 5334

PROJECT	Quality Control Test	**DATE**	17-Jan-2018
CLIENT	Riyadh Block Factory	**REF No.**	SMF-4918
LOCATION	Palestine street, Jeddah, Kingdom of Saudi Arabia	**EQPT. USE**	KD-2 Pro
SAMPLE	Insulated Conrete Masonry Units (40 x 30 x 20 cm) with 5.5 insulation		

	Test Parameters	unit	Test Result			
			1			
1	Length of Sample	mm	400			
2	Width of Sample	mm	300			
3	Height of Sample	mm	200			
4	Face Shell Thickness	mm	30			
5	Insulation Thickness	mm	55			
6	Thermal Conductivity of Block(λ_c)	W/m-^{0}K	0.362			
7	Thermal Conductivity of EPS(λ_{EPS})	W/m-^{0}K	0.033			
8	Thermal Conductivity of Air(λ_a)	W/m-^{0}K	0.0257			
9	Thermal Resistance for Insulated Blocks (R-Value)	m^2-^{0}K/W	3.891			
10	Thermal Transmittance for Insulated Blocks (U-Value)	W/m^2-^{0}K	0.257			

REMARKS Sample delivered by client to SAFCO laboratory, Information provided by the client

TESTED BY :		CHECKED BY :	
NAME	Usman	NAME	M. Coronado
SIGNATURE		SIGNATURE	
DATE	17 January 2018	DATE	17 January 2018

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SOIL & FOUNDATION CO. LTD.

مقاومة الضغط لوحدات البناء · ASTM C90

مختبرات SAFCO · يناير 2018

تقرير اختبار

نسخة للاطلاع فقط | مصنع بلك الرياض FOR REFERENCE ONLY · rbf.sa

Compressive Strength of Concrete Masonry Units

PROJECT	Quality Control Test	**DATE**	21-Jan-2018
CLIENT	Riyadh Block Factory	**REF**	SMF-4918
LOCATION	Palestine street, Jeddah, Kingdom of Saudi Arabia		

Concrete Masonry Units			
LENGTH	40.0 cm	NET AREA	324.80 cm^2
HEIGHT	19.5 cm	NET VOLUME	6333.6 cm^3
WIDTH	14.5 cm		

DATE CAST		Web Thickness	2.8 cm
DATE RECEIVED	21 January 2018	Face Shell Thckness	2.8 cm
DATE TESTED	21 January 2018	Number of cell	3 cell

Sample No.	SAMPLE DESCRIPTION	AGE (days)	WEIGHT (gm)	DENSITY gm/cm^3	LOAD (kN)	STRENGTH (MPa)
B - 1	Concrete Masonry Units (40 x 15 x 20)	-	18,306	2.890	604.3	18.61

ASTM C 90 Requirements for Load Bearing Concrete Masonry Units

	Compressive Strength based on Net Area (MPa)
Average of 3 units	13.1
Individual unit	11.7

Remarks: Sample tested comforms with the requirements of ASTM C 90

Supplier :

TEST PERFORMED BY :		CHECKED BY :	
NAME	Tajul Islam	NAME	M. B. Coronado
SIGNATURE		SIGNATURE	
DATE	21 January 2018	DATE	21 January 2018

شركة التربة والاساسات المحدودة
SOIL & FOUNDATION CO. LTD.

تقرير العزل الصوتي (STC) · بلك 20 سم · صفحة 1 من 3

مختبرات ASTM E413 · GECO · ديسمبر 2017

تقرير اختبار

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بسم الله الرحمن الرحيم

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Limited Liability
Paid Capital : Two Million Riyals
C.R. 1010299565 - C.C. 243710
Head Office : Riyadh

الشركة الجيو تقنية والبيئية المحدودة [جيكو]
ذات مسئولية محدودة
رأس المال مليونان ريال مدفوع بالكامل
سجل تجاري ١٠١٠٢٩٩٥٦٥ – عضوية الغرفة ٢٤٣٧١٠
المركز الرئيسي – الرياض

30th Dec. 2017 Geco-Air /1230

Messrs.: **AL-RIYADH PLANT FOR BLOCK.**
Jeddah, Kingdom of Saudi Arabia

Attn: Eng Mahmoud Fessal **(Product Engineer)**

Subject: **Determination of Sound Transmission class STC Report of Concrete Block**

Dear Sir,

Based on your request we are pleased to submit herewith the laboratory sound transmission report that has carried out on the concrete block samples delivered by your representative for your proposed project that is located in Jeddah, Kingdom of Saudi Arabia.

Methodology:-

Testing for airborne sound transmission is performed under rigidly established procedures set up by the American Society for Testing and Materials (ASTM procedure E-413). Several independent acoustical laboratories across the nation are qualified to perform the tests. Although all are presumably reliable and follow the ASTM procedure, the results tend to vary slightly. For this reason, test results from more than one laboratory should never be compared on an exact basis.

Tests are conducted on a sample assembly, at least 2.4 m×2.4 m in size. The assembly is installed between two blocks constructed in such a way that sound transmitted between the rooms by paths other than through the assembly is insignificant. Background noise in the rooms is monitored to ensure it does not affect.

ت : ٠١ - ٢٩٢٤١٠١ / ٢٩٢٤١٠٣ - فاكس : ٠١ - ٢٩٢٤١٠٤ - ص.ب ٥٣٦١٣ الرياض ١١٥٩٣ – المملكة العربية السعودية
Tel. : 01 - 2924 101 - 2924 103 - Fax :01 - 2924 104 - P.O.Box 53613 Riyadh 11593 - Kingdom of Saudi Arabia
E-mail : geco_ryd@yahoo.com / www.geco-Ksa.com

تقرير العزل الصوتي (STC) · بلك 20 سم · صفحة 2 من 3

مختبرات ASTM E413 · GECO · ديسمبر 2017

تقرير اختبار

The sound source consists of an electronic device and loudspeaker which produce a continuous random noise covering aminimum frequency range of 125 to 4,000 Hz (Hertz—cycles per second).sound level is measured at several microphone positions in each blocks direction. Readings are taken at sixteen 1/3-octave frequency-band intervals. Average sound levels in the receiving direction are subtracted from the corresponding sound levels in the source sound direction. The differences (sound levels of the actual transmission) are recorded as transmission-loss values.

Table – 1, Sound Transimission Class STC of 0.2 m thickness of concrete block,

No.	Frequency Hrz	Sound Transmission Class STC (dB)
1-	125	35
2-	160	36.3
3-	200	40.7
4-	250	43.8
5-	315	48.7
6-	400	60.9
7-	500	73.5
8 -	630	70.1
9-	800	73.3
10-	1000	65.5
11-	1250	73.8
12-	1600	76.1
13-	2000	77.2
14-	2500	67.8
15-	3150	70.2
16-	4000	68.3
Avg		61.32

الشركة الجيوتقنية والبيئية المحدودة [جيكو]
Geotechnical & Environmental Co. Ltd.

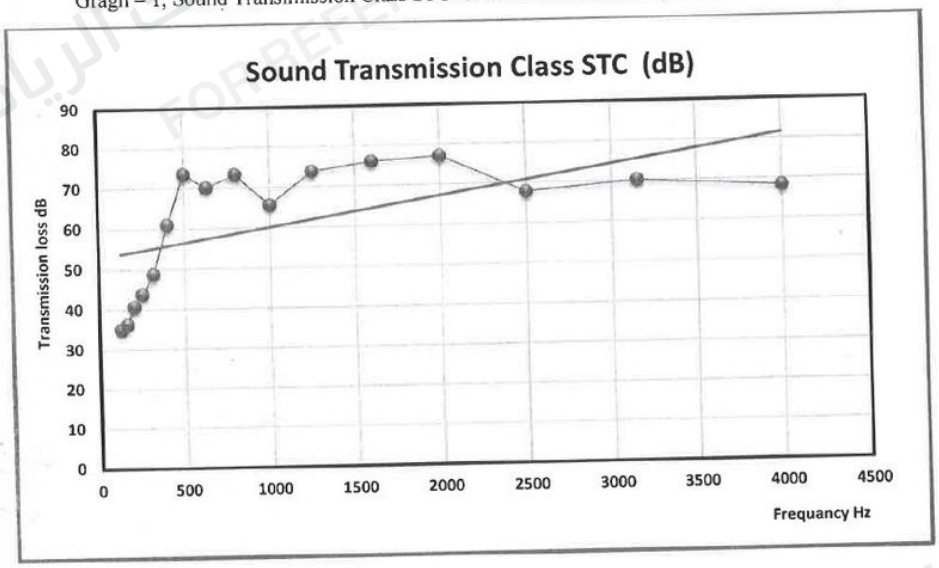
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تقرير العزل الصوتي (STC) · بلك 20 سم · صفحة 3 من 3

مختبرات ASTM E413 · GECO · ديسمبر 2017

تقرير اختبار

Gragh – 1, Sound Transimission Class STC of 0.2 m thickness of riyadh concrete block,



Test result:

Through analysis of the results found that the average of sound tranmission class STC for concrete block of 20cm thickness has 60.28 decibel.

We appreciate this opportunity to be of service to you on this project. Please do not hesitate to contact us if you have any questions regarding this project, or if we can be of further service.

With best regards,

GEOTECHNICAL & ENVIRONMENTAL CO.
(G E C O)

Material/Dr.Ayman abu Halwa,
GECO, Al Riyadh Office

الشركة الجيوتقنية والبيئية المحدودة [جيكو]
Geotechnical & Environmental Co. Ltd.

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حساب مقاومة الحريق · بلك بركاني 20 سم

آركي بلان · د. عبدالله بخاري · أكتوبر 2017

تقرير اختبار

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Archiplan
Dr. Abdulla Y. Bokhari
Geotechnical Engineering Division

آركـــي بـــلان
مكتب الدكتور / عبدالله يحيى بخاري
قسم هندسة التربة والمواد

FIRE RATING RESISTANCE CALCULATION

PROJECT	FIRE RESISTANCE	LAB REF.	639 / 2017
CLIENT	AL RIYADH BLOCKS FACTORY - JEDDAH	DATE	16/10/2017
TEST REF.	BUILDING OFFICIALS CONFERENCE OF AMERICA		

BLOCK TYPE		POZLAN BLOCK
BLOCK SIZE		20X15X40 CM
HEIGHT	(CM)	20.00
WIDTH	(CM)	15.00
LENGTH	(CM)	40.00
NO. OF OPENINGS		3.00 Closed at End
WALL THICKNESS	(CM)	2.50
TOTAL VOLUME	(CM^3)	12000.0
OPENING VOLUME	(CM^3)	3487.0
SOLID VOLUME	(CM^3)	8513.0
EQUIVALENT THICKNESS	(CM)	10.64
EQUIVALENT THICKNESS	(INCHES)	4.19
FIRE RATING RESISTANCE	(HOURS)	2.22
RATING IN TIME (HOURS)		2:13:12

ARCHIPLAN
LICENSE NO. 423
DR. ABDULLA Y. BOKHARI
GEOTECHNICAL DIVISION

آركي بـلان
ترخيص رقم ٤٢٣
مكتب الدكتور عبدالله يحيى بخاري
قسم هندسة التربة والمواد

FIRE RESISTANCE - RIYADH FACTORY

اختبار المقاومة الحرارية · بلك بركاني مفرّغ

آركي بلان · د. عبدالله بخاري · مايو 2017

تقرير اختبار

Archiplan
Dr. Abdulla Y. Bokhari
Geotechnical Engineering Division

آركـــي بـــلان
مكتب الدكتور/ عبدالله يحيى بخاري
قسم هندسة التربة والمواد

THERMAL RESISTIVITY TEST

PROJECT	TESTING OF POZZLANIC BLOCK			TEST No.	1
CLIENT	AL RIYADH BLOCK FACTORY				
MATERIALS	HOLLOW BLOCK 20 X 25 X 40 4 HOLES WITH CLOSED END + 1 HOLE OPEN				
EQUIPMENT	THERMAL RESISTIVITY EQUIPMENT			DATE	03/05/2017
LAB. REF. NO.	315 / 2017	TESTED BY	GECO	TEST REF.	IEEE Std 442

TIME (MINUTES)	TEMPERATURE (C°) SAMPLE 1	SAMPLE 2	SAMPLE 3	AVERAGE
0.00	43.20	43.90	41.10	42.73
1.00	43.90	44.70	41.80	43.47
2.00	44.50	45.20	42.70	44.13
3.00	44.90	45.40	43.50	44.60
4.00	45.30	45.80	44.10	45.07
5.00	45.60	46.10	44.40	45.37
6.00	45.80	46.30	44.70	45.60
7.00	46.00	46.50	44.90	45.80
8.00	46.20	46.70	45.10	46.00
9.00	46.40	46.80	45.20	46.13
10.00	46.75	47.03	45.70	46.49

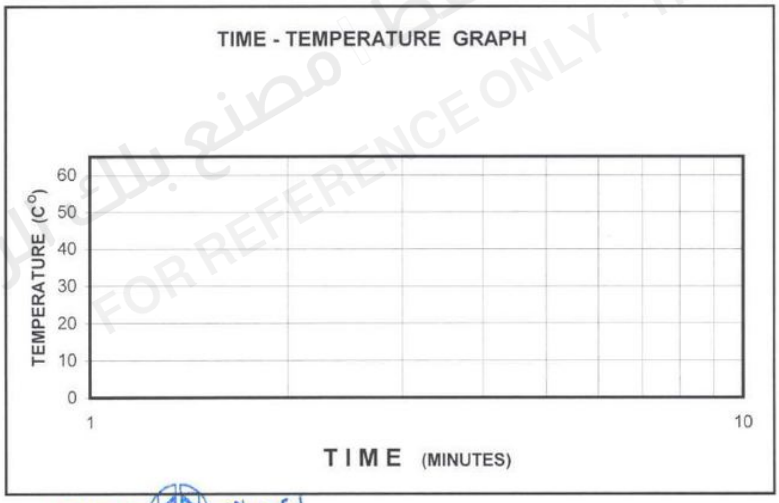
THERMAL RESISTIVITY EQUATION :

$$K = 4\pi\ (T2-T1) / 2.303\ Q$$

Q : Heat dissipated per unit length W/cm T2-T1 : Difference in temperature for one cycle on the semilog curve

Q =	0.36	T-1 =	43.47	T-2 =	46.49

THERMAL RESISTANCE	3.057	M^2 K/W
THERMAL CONDUCTIVITY	0.327	W/m^2 K



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آركي بلان ترخيص رقم ١٢٣ مكتب الدكتور عبدالله يحيى بخاري قسم هندسة التربة والمواد

THERMAL- HOLLO BLOCK - RIYADH BLOCK FACTORY

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شهادة مطابقة الإسمنت · SASO 1914 / ASTM C150

شركة أبناء عيد عبدالرحمن الصبحي · إسمنت رابغ · يناير 2018

تقرير مورد

EID A. AL-SOBHI SONS
LIMITED LIABILITY CO.
For Trading, Transport & Cement Selling
HEAD OFFICE : BADR
C.R. : 4702001180

شركة أبناء عيد عبدالرحمن الصبحي
ذات مسئولية محدودة
للتجارة والنقل وبيع الإسمنت
المركز الرئيسي : بدر
س.ت : ٤٧٠٢٠٠١١٨٠

To whom it may be concerned

We certify that our products we provide to our customer **Riadh Block Factory** with the exact descriptions according to **SASO /1914** and **ASTM** standards **C150/C150M**-11 and we comply of above specifications according to tests reports attached with this certificate from **Rabigh Cement Plant** .

And this to whom it may concern that is **theRiadh Block Factory** is one of our customers .

9/1/2018

Company stamp

المركز الرئيسي : بدر : تليفون ٣٣٢٢٠٠٠ / ٠١٤ فاكس : ٣٣٢٠٣٨٠ / ٠١٤ ص.ب : ٥٨ - المملكة العربية السعودية
فرع جدة - تليفون وفاكس ٦٢١٧٦٥٥ جوال : ٠٥٠٥٣٦١٣٥٩ رابغ - تليفون : ٤٣٢٢١٦٢ / ٠١٢ ترخيص نقل : ٠٠٩٣٠٠
فرع القصيم : ت : ٠١٦/٣١٦٠٠٦١ - فرع ينبع : ج : ٠٥٥٤٣٤٤٠٠٩ - فرع ضباء : تليفون: ٤٣٢٤٢٣٥ - برقيا : أبناء عيد - المملكة العربية السعودية
MAIN CENTER : BADAR : Tel. : 014/3322000 - Fax : 014/3320380 - P.O.Box : 58 - Kingdom of Saudi Arabia
Jeddah Branch: Tel. & Fax: 6217655 Mob.: 0505361359 - Rabigh: Tel.: 012/4232162 - Licence Transportation: 009300

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شهادة مطابقة شرائح العزل الحراري (بوليسترين)

الشركة العربية الكيماوية المحدودة (ACC) · نوفمبر 2017

تقرير مورد

Arabian Chemical Company Ltd.
(Polystyrene)
Jeddah Industrial Estate - 3rd Phase
P.O.Box 30135, Jeddah 21477, Saudi Arabia
Tel.: 637 2485 / 637 3253 / 637 8150 / 636 0133
Fax: 637 3286

ACC

الشركة العربية الكيماوية المحدودة
(بوليستيرين)
جدة - المنطقة الصناعية - المرحلة الثالثة
ص.ب ٣٠١٣٥ جدة ٢١٤٧٧ - المملكة العربية السعودية
هاتف : ٦٣٧ ٢٤٨٥ / ٦٣٧ ٣٢٥٣ / ٦٣٧ ٨١٥٠ / ٦٣٦ ٠١٣٣
فاكس : ٦٣٧ ٣٢٨٦

CERTIFICATE OF COMPLIANCE

CUSTOMER : RIYADH BLOCK FACTORY

PRODUCT : STYROFOAM THERMAL INSERT (50X200X315)

ORDER : 3001/20170008

ACC ORDER : 21061

DATE : November 22, 2017

GENTLEMEN,

THIS IS TO CERTIFY THAT OUR PRODUCT STYROFOAM THERMAL INSERT (50X200X315) EXTRUDED POLYSTYRENE INSULATION INSERT SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS

1. DENSITY : 30 Kg/m3
2. COMPRESSIVE STRENGTH : 250 Kpa

SINCERLEY,

FOR
ARABIAN CHEMICAL CO. (POLYSTYRENE) LTD.

HANI A. KHALAF
MANUFACTURING DIRECTOR

ARABIAN CHEMICAL CO (POLYSTYRENE) LTD.
P.O. BOX 1049 JEDDAH
C.R. 4030047091

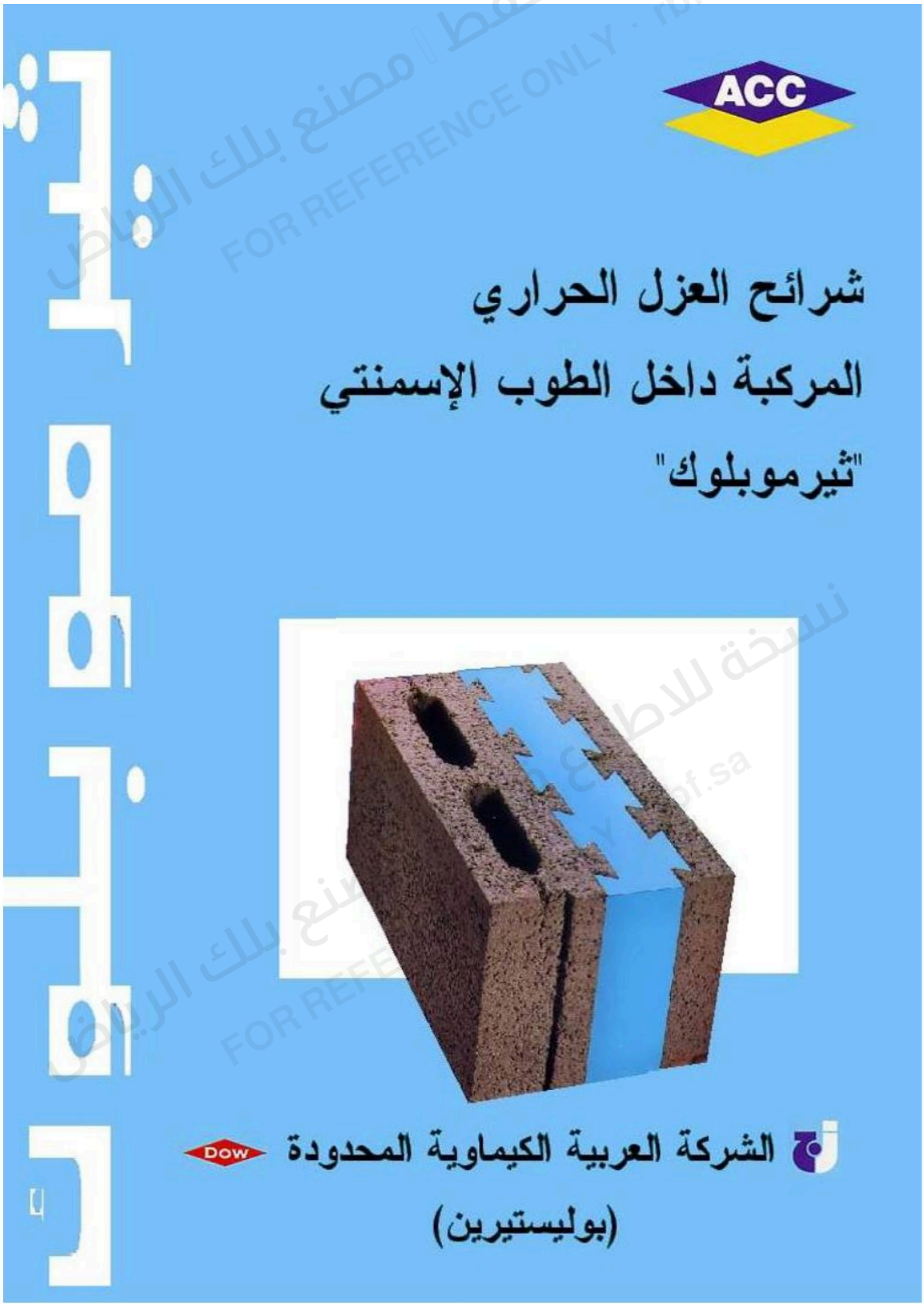
(*) Trademark of Dow Chemical Co.

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المواصفات الفنية لشرائح العزل الحراري داخل البلك · صفحة 1 من 5

الشركة العربية الكيماوية المحدودة (ACC) · نشرة فنية

تقرير مورد



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المواصفات الفنية لشرائح العزل الحراري داخل البلك · صفحة 2 من 5

الشركة العربية الكيماوية المحدودة (ACC) · نشرة فنية

تقرير مورد

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الخصائص	المواصفات	الوحدة	شريحة ستيروفوم* تيرموبلوك
الكثافة (متوسط)	المواصفات الألمانية DIN 53420 المواصفات الامريكية ASTM D1622	كجم/م٣ باوند/قدم٣	30 1,87
معامل التوصيل الحراري عند متوسط درجة حرارة (50°F) 10 °C و عند متوسط درجة حرارة 23,9° C (75°F)	المواصفات الألمانية DIN 52612 DIN 52616 و الأمريكية ASTM C 177-97 أو ASTM C 518-98H	واط / م.كالفن بى تى يو . بوصة / قدم٢ ساعة.درجة فهرنهايت	0,029 0,21
قوة الضغاطية عند انحراف ١٠%	المواصفة الألمانية DIN 53421 و الأمريكية ASTM D 1621-95	كيلوباسكال باوند / بوصة مربعة	210 30
امتصاص الماء مع الغمر	المواصفات الألمانية DIN 53428 والامريكية ASTM D 2842 (لدقة الحجم ±1%)	نسبة % بالحجم نسبة % بالحجم	0,2 > ≤ 1
عامل مقاومة نفاذية بخار الماء μ قابلية نفاذية بخار الماء[1]	المواصفات الألمانية DIN 52615 المواصفات الامريكية ASTM E 96	-- برم-بوصة	80-160 1
الحانبية الشعيرية	--	--	لا شيئ
الثباتية الحرارية / مقاومة الهبوط عند الانضغاط	المواصفات الألمانية DIN 18164	٢٠ كيلوباسكال، ٨٠ درجة مئوية نوع ٢,٨ باوند للبوصة المربعة ١٧٦ درجة فهرنهايت ٤٠ كيلوباسكال، ٧٠ درجة مئوية نوع ٥,٨ باوند للبوصة المربعة ١٥٨ درجة فهرنهايت	دبليو W
المعامل الطولي للتمدد و التقلص الحراري (في ظروف التسخين و التشبع في الماء)	المواصفة الألمانية DIN 52328	$°C^{-1}$ $°F^{-1}$	$70\ 10^{-6}$ $39\ 10^{-6}$
التغيير البعدي الغير قابل للعكس نتيجة الإختبارات المعملية تحت تغيرات درجة الحرارة حتى 60° C (104°F)	--	%	--
تصنيف الحريق (الناتج) يمكن إنتاج مواد بتصنيف (ب١) عند الطلب	المواصفة الألمانية DIN 4102	فئة مواد البناء	ب ٢
التصنيف حسب اندرايترز ليبوراتوريز انس classification (UL) وفقاً للمواصفات الامريكية ASTM-E-84 Standard Test Method for بطريقة اختبار خاصية اشتعال أوجه مواد البناء وفق المواصفات الأمريكية[2] ASTM C 578-95	انتشار اللهب تكثف الدخان (وذلك لكثافة قصوى ٤ باوند للقدم المكعب و سماكة قصوى ٤ بوصة)	--	5 165
الأبعاد (بالملليمتر) العرض الطول السماكة	--	--	 200 400و390 ٧٥ الكلي و ٦٠ الصافي (التصميمي)
المظهر (ملمس السطح)	--	--	سطح خشن (تم إزالة السطح الأملس لتحسين التماسك مع الاسمنت)

[1] القيمة تتعلق بمقدار السماكة
[2] السماكات الخاصة فقط عند الطلب و بتكلفة مختلفة

*™® علامة تجارية لشركة داو كاميكال

المواصفات الفنية لشرائح العزل الحراري داخل البلك · صفحة 3 من 5

الشركة العربية الكيماوية المحدودة (ACC) · نشرة فنية

تقرير مورد

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ستايروتك

ألواح العزل الحراري

ينتج مصنع الرياض للعزل الحراري و مواد التعبئة (ستايروتك) نوعين من ألواح العزل الحراري المصنعة من مادة البولي ستايرين الممدد و هي مادة عضوية ذات كفاءة عالية في العزل الحراري و كثافة مرتفعة و انخفاض نفاذيتها للماء.

ستايرو الألواح العازلة



الكثافة (كجم /م^3):

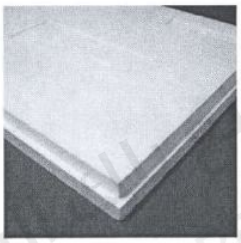
- ١٢، ١٤، ١٦ و تستخدم في عزل الأبواب الحديدية و العربات المتنقلة
- (الكرفانات) و ردم الأماكن المنخفضة.
- ٢٠، ٢٥ و تستخدم في عزل الجدران إضافة لاستخدامها في الأعمال الفنية (ديكورات ، مجسمات..)
- ٣٠، ٣٥ و تستخدم في عزل الأسقف
- ٤٠، ٤٥، ٥٠ و تصنع حسب الطلب للأغراض الخاصة

الأبعاد (سم):

الطول	العرض	الإرتفاع
من ١ – ٤٠٠	من ١ – ١٢٥	من ١ – ١٠٠

ألواح الفولكانو

و هي ألواح مقولبة ذات تصميم متراكب تسهل من عملية التركيب و تلغي الجسور الحرارية . يتوفر من ألواح الفولكانو نوعين أساسين:



الكثافة (كجم / م^3)	الأبعاد (سم)	الإستخدام
٢٤-٢٦	٤×٧٥×١٠٠	عزل الجدران
	٥×٦٠×١٢٥	
٣٢-٣٥	٤×٧٥×١٠٠	عزل الأسقف
	٥×٦٠×١٢٥	

ملاحظة : تزداد كفاءة العزل في الألواح العازلة كلما زادت السماكة و بنفس النسبة تقريباً . بينما يكون تأثير زيادة الكثافة بسيط من ناحية أخرى ، فمثلاً :

- سماكة ٨ سم تعزل أفضل بنسبة ١٠٠٪ من سماكة ٤ سم
- كثافة ٣٠ كجم / م^3 تعزل أفضل بنسبة ٢٠٪ من كثافة ١٥ كجم / م^3

و لكن قد يكون من الضروري أحيانا استخدام كثافات عالية لاعتبارات أخرى .

٣

المواصفات الفنية لشرائح العزل الحراري داخل البلك · صفحة 4 من 5

الشركة العربية الكيماوية المحدودة (ACC) · نشرة فنية

تقرير مورد

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ستايروتك

خصائص ألواح العزل الحراري المصنعة من مادة البولي ستايرين الممدد

تتميز ألواح العزل الحراري المصنعة من مادة البولي ستايرين الممدد التي ينتجها مصنع الرياض للعزل الحراري و مواد التعبئة

(**ستايروتك**) بمميزات عديدة منها :

١. مقاومة حرارية عالية و معامل انتقال (توصيل) حراري متدني جدا
٢. لا تتأثر بالمواد الحامضية أو القلوية ، و لا تهاجمها البكتيريا أو الفطريات
٣. نسبة متدنية جدا لامتصاص الماء (لا تتعدى ٠,٢-١,٠ ٪ من الحجم)
٤. لا تتأثر موصليتها الحرارية مع مرور الزمن
٥. مرونة كبيرة في اختيار الكثافات و السماكات حسب الطلب
٦. لا تحتوي على غازات ضارة

الخواص	اسم الاختبار	الوحدة	الكثافة				
الكثافة	Din53420	Kg/M^3	15	20	25	30	35
مقاومة الانضغاط عند 2% انضغاط	Din53421	K Pa	12 -25	20 -35	28 -50	36-62	44 -74
مقاومة الانضغاط عند 10% انضغاط	Din 53421	K Pa	65 -110	100 -160	140 -210	180 -225	225 -305
مقاومة الالتواء	Din 53423	K Pa	160 -210	300 -240	325-400	410 -490	450 -600
مقاومة الشد	Din 18164	K Pa	150 -230	225 -325	260 -415	375 -510	490 -590
مقاومة الكسر	Din 53427	K Pa	90 -120	120 -150	150 -190	190 -220	220 -250
معدل معامل التمدد الخطي بين درجة حرارة 20 -80 م	Din 53752	K^{-1}	6×10^{-5}	6×10^{-5}	6×10^{-5}	6×10^{-5}	6×10^{-5}
ثباتية الأبعاد تحت حرارة ذات مدى قصير	Based On Din 53424	C°	95	95	95	95	95
ثباتية الابعاد عند التعرض لدرجة حرارة للمدى الطويل و التعرض لضغط 5 Kpa	Based On Din 18164	C°	85	85	85	85	85
ثباتية الابعاد عند التعرض لدرجة حرارة للمدى الطويل و التعرض لضغط 20Kpa		C°	75 -80	80 -85	80 -85	80 -85	80 -85
المدى الحراري للاستمرارية في العزل في الهواء	Din 18164	C°	-180 to +85	-180 to +85	-180 to +85	-180 to +85	-180 to +85
الموصلية الحرارية عند درجة 0-10 م	Din 52612	W/mk	00.32-0.036	0.034 -0.035	0.030 -0.034	0.029 -0.033	0.029 -0.033
سماحية نفوذ بخار الماء	Din 53429	g/day.m	40	35	26	20	16
امتصاص الماء بعد الغمر لمدة 7 أيام	Din 53428	Vol. %	3	2.3	2.2	2	1.9
امتصاص الماء بعد الغمر لمدة 1 سنة		Vol. %	5	4	3.8	3.5	3.2

المواصفات الفنية لشرائح العزل الحراري داخل البلك · صفحة 5 من 5

الشركة العربية الكيماوية المحدودة (ACC) · نشرة فنية

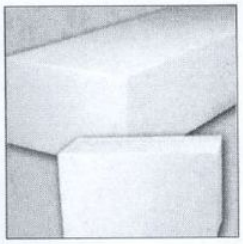
تقرير مورد

نسخة للاطلاع فقط // مصنع بلك الرياض
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ستايروتك

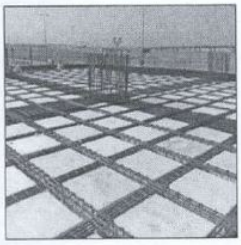
ستايرو هوردي الفلين

سعياً من من مصنع الرياض للعزل الحراري و مواد التعبئة (ستايروتك) لتقديم منتجات مفيدة تساعد في مجال البناء؛ قمنا بإنتاج ستايرو هوردي الذي يمثل الحل الأفضل في الأبنية المرتفعة و ذات المسافات الكبيرة بين الأعمدة، حيث أن استخدام ستايرو هوردي يقلل من الأحمال و يوفر الوقت و الجهد، حيث يمكن تخفيف كميات حديد التسليح و لن يكون هناك هدر في الخرسانة و ستختصر وقت التحميل و التركيب للهوردي (مقارنة بالمنتجات الأخرى)، اذ يمكن توفير ما لا يقل عن ١٨٠ كجم/م^2 من الأحمال في سماكة هوردي ٢٥ سم مثلاً .



مميزات ستايرو هوردي :

- مرونة في الأبعاد ، حيث يتم التحكم في الارتفاع و العرض حسب احتياج السقف
- قوي و بدرجة كبيرة و كافية و تصميمه المصمت يمنع من تسرب الخرسانة
- تساهم في عزل الصوت و الحرارة



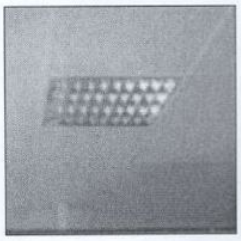
الكثافات المتوفرة لـ ستايرو هوردي :

يتوفر العديد من الكثافات في منتج ستايرو هوردي (مثل الألواح العازلة)، غير أن كثافة ١٢- ١٤ كجم / م^3 تعتبر كافية لهذا المنتج ، و يمكن إنتاج أي كثافة أخرى حسب رغبة العميل .

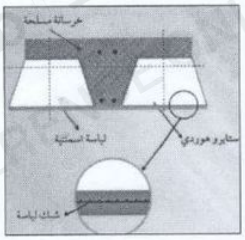
الأحجام المتوفرة :

الطول (سم)	العرض (سم)	الارتفاع (سم)
من ١ - ٤٠٠	من ١ - ١٢٠	من ١ - ١٠٠

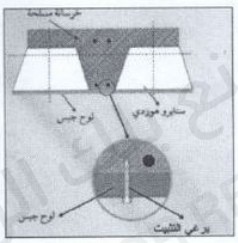
بدائل التشطيب و اللياسة :



سقف مستعار، اذ انه في هذه الحالة لا داعي لتليس السقف .



شبك اللياسة ، و يوضع بشكل متعامد مع اتجاه الأعصاب و يجب شده جيداً و وضعه قبل مد السقف



ألواح الجبس ، و يتم تثبيتها بواسطة براغي خاصة تثبت في الأعصاب الخرسانية ، ثم يتم وضع المعجون على الفواصل

شهادة جودة مواد العزل (EPS) الموردة للمصنع

المصنع الوطني لصناعة البوليسترين (Styrenpack)

تقرير مورد

نسخة للاطلاع فقط / مصنع بلك الرياض
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STYREN PACK ستايرينباك

The National Factory for Polystyrene Packs Co.
Company Limited
Licence Number 6 Date 06/01/1397 H
C.R. No. 12551 Date 04/07/1397
J.C.C. No. 2704
Capital Paid : SR. 7,792,500

شركة المصنع الوطني لعبوات البوليستايرين
شركة ذات مسئولية محدودة
ترخيص رقم ٦ في ١٣٩٧/١/٦ هـ
س.ت رقم ١٢٥٥١ في ١٣٩٧/٧/٤ هـ
غ.ت.ح رقم ٢٧٠٤
رأس المال المدفوع ٧،٧٩٢،٥٠٠ ريال سعودي

TOTAL QUALITY MANAGEMENT

بسم الله الرحمن الرحيم

شهادة جودة لمواصفات منتج البلك

السادة / مصنع بلك الرياض للبلك الإسمنتي بمقاساته وأنواعه يحفظهم الله

السلام عليكم ورحمة الله وبركاته ..وبعد

نفيد عنايتكم بأن نوع الفلين المورد الى مصنع بلك الرياض هو (EPS) ومقدار الضغط = (١٤) وله حد مدى متفاوت مسموح به (±١٠%)

وتفضلو منا خالص الشكر والتقدير

قسم الجودة الشاملة

المنطقة الصناعية - المرحلة الثانية - ص.ب ٥٣٩٨ - جدة ٢١٤٢٢ - المملكة العربية السعودية - تليفون : ٦٣٦٠٥١٧ (٥ خطوط) - فاكس : ٦٣٧٨٩٦٤
Industrial City Stage 11 - P.O. Box 5398 Jeddah 21422 - Kingdom of Saudi Arabia - Tel. : 6360517 (5 Lines) - Fax : 6378964
E-mail: styrene@styrenpack.com Website: http://www.styrenpack.com

تقرير التحليل المخبري للمياه

مصنع الري للمياه · يناير 2018

تقرير مورد

نسخة الاطلاع فقط / مصنع بلك الرياض
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Al-Rai Water Factory

Water Treatment & Bottling System

AL-RAI

مصنع الري للمياه

محطة معالجة المياه ونظام التعبئة

Date : 9.1.2018

التاريخ :

DAILY LABORATARY REPORT

PARAMETERS		Al-Rai Composition (mg/l)
PH		7.8
TDS (TOTAL DISSOLVED SOLIDS)		241
CONDUCTIVITY		185µs
IRON(Fe++)		0
FREE CHLORINE		0.04
NITRATE(NO3-)		3.2
SODIUM(Na+)		12.0
CALCIUM(Ca++)		12.9
MAGNESIUM(Mg++)		1
POTASIUM(K+)		0.4
CHLORIDE (Cl-)		45
TOTAL HARDNESS		60
FLOURIDE (F-)		0.8
BICARBONATE (HCO3-)		11.5
SULFFATE(SO4--)		2.8
TURBIDITY		0 FTU

MICROBIOLOGICAL ANALYSIS

PARAMETER	RESULTS (COLONY/100ml)
TOTAL BACTERIA COUNT	Nill
TOTAL COLIFORM COUNT	Nill

ANALYSED BY
CHEMIST
Nadirshahan

MICROBIOLOGIST
Muhsin Ahmed

المملكة العربية السعودية – جدة –ت الإدارة : ٢٨٦٩٦٢٠ – ف : ٦١٢٠٢٠٢ – الصناعية ت : ٦١٢٠٢٠٢ – ص.ب ٤٣١١١ جدة ٢١٥٦١
Saudi Arabia - Jeddah - Tel. Office : 2869620 - Fax : 6120202 - Factory Tel.: 6120202 - P.O. Box 43111 Jeddah 21561
E-mail : alrai_factory@hotmail.com